THE CAREER ANCHORS, JOB INVOLVEMENT AND JOB SATISFACTION OF PROFESSIONAL PEOPLE

by

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ABSTRACT

THE CAREER ANCHORS, JOB INVOLVEMENT AND JOB SATISFACTION OF PROFESSIONAL PEOPLE

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The study was designed primarily to test the effect of career orientations on the work outcomes of job satisfaction and job involvement among South African professional people. The hypotheses relating the career orientation, job satisfaction and job involvement constructs were extrapolations from the original theory of Edgar Schein (1978, 1985, 1987b).

Secondary aims included an initial assessment of the psychometric properties of the measuring instruments for a South African sample, and comparisons among the 14 professional groups sampled on each of the dependent variables.

A questionnaire incorporating the Career Orientation Inventory, the Kanungo Job Involvement Scale and the Short-Form Minnesota Job Satisfaction Questionnaire was mailed to random samples of people aged from 30 to 44 drawn from 14 professional registers. Four thousand and eighty-four questionnaires were sent out and 1791 returned and used in the final analyses. The psychometric structures of the measuring instruments were assessed using principal components and factor analyses with Promax and Varimax rotations of the

factors. Reliabilities of the measuring instruments were assessed using Cronbach's (1947) Alpha coefficient formula. Differences between professional groups' scores on each research variable were tested for significance, using one-way analyses of variance and Bonferroni ranges tests. Finally, the relationships between the career orientations and the dependent variables job involvement and job satisfaction were explored using a stepwise multiple regression procedure. Regression analyses were performed on the entire sample and for each professional group separately.

The Career Orientation Inventory was found to be unstable within the South African professional population as against the USA normative data. The analyses generated numerous guidelines for the refinement of the instrument while for further analyses, factor analytically derived scales were used in favour of the original scales. The reliabilities of these scales were generally high with the exception of a factor interpreted as an orientation towards an integrated life style. The involvement and satisfaction measures proved to be both reliable and valid.

Significant differences between the professional groups were found on each of the variables under study. From the data generated by these analyses, relative profiles of each profession on all the variables were constructed. A finding of particular concern was the extremely low satisfaction reported by South African nurses both in comparison to other South African professionals and to normative data for nurses in the United States of America.

The results of the stepwise regression of the career orientations onto the job satisfaction variables did not support the first research hypothesis. A number of career orientations were shown to be related to job satisfaction in each instance but not to a very high degree. Particularly noteworthy was the finding that the career orientations most conducive to job satisfaction within any particular profession were not necessarily the dominant orientations within that profession. This finding has important implications for career counselling that emphasizes the interaction between work-related values and environments.

The second research hypothesis was supported by the regression of the career orientations onto the job involvement variable. Regression models accounting for over 40% of the variance in job involvement experienced were calculated for a number of the professional samples. Job involvement was most strongly related to an orientation towards challenging and competitive work. A theoretical model was constructed to explain the relationship between job involvement and an orientation towards challenge and competition.

CHAPTER ONE

INTRODUCTION

> "We must assume there is a man such as I might have been, better informed, better employed, thinner and more active."
> H.G. Wells (1905, p. 25) Modern Utopia.

A career, according to Hall (1976) represents a person's entire life in the work setting, and work provides a setting for satisfying practically the whole range of human needs. Thus, work directed at helping people become better informed and better employed assumes great significance. This may be the broad missionary directive motivating the present and all studies of careers and the variables that make them fulfilling. (For the moment we shall ignore the diet and exercise requirements of Wells' utopian figure!)

The career is a complex subject for study. It exists not in absolute terms, but as an interaction between personality, occupational, organisational and even cultural characteristics and furthermore implies a lifelong pursuit. Mirroring this complexity, research into careers has been criticised as eclectic and disjointed and as having limited cumulative significance (Collin & Young, 1986).

The reality of the study of careers is thus one of great promise but has which has borne little fruit relative to the

effort invested. Introducing the present study into this complex and somewhat desultory scenario requires over and above evidence of its relevance, evidence that it attempts to stand apart from the previous research that has been described as incoherent and segmental (Collin & Young, 1986). To that end, the present study will be introduced by describing it more by what it may not be than by what it is. That is, some of the primary pitfalls that have been identified in contemporary research are presented and the manner in which the present study attempted to avoid them is highlighted.

Among the most common weaknesses that have been identified in recent research are:

- a lack of theory-based research (Fitzgerald & Rounds, 1989; Harmon & Farmer, 1983);
- a predominant concern with the objective rather than the subjective career (Collin & Young, 1988);
- a reliance on students and other "convenience" samples (Harmon & Farmer, 1983; Phillips, Cairo, Blustein & Myers, 1988);
- insufficient and inaccurate use of multivariate statistics (Fitzgerald & Rounds, 1989).

Theory-Based Research

There is no denying that a great deal of theory has developed around the career construct. The major thrusts of

this theory will be detailed in the following chapter. Despite the body of theory, however, little research is theoretically determined (Fitzgerald & Rounds, 1989). An extreme view is that of Serlin (1987, p. 370) who went so far as to say "the result is a proliferation of what could generously be called isolated theories, but Meehl (1978) termed this naive guessing".

In trying to avoid this pitfall, the present research hypotheses (see Chapter Six) focus on predictions derived from the career anchor/orientation theory (Schein, 1975, 1977a, 1978, 1982, 1985, 1987b). Furthermore, the age range of the research sample was decided partly on the basis of the career stage theories reviewed in Chapter Two.

The Subjective Career

Collin and Young (1986) expressed the concern that the perceptions, feelings and values of individuals are ignored in studies of the career. The present research therefore focusses on peoples' working values and on the experience and evaluation of their working life reflected in their job satisfaction and job involvement. These two outcome variables, satisfaction and involvement, may well determine a personal view on whether a career is successful or not. Consequently they may be more important than more objective

indices of career progression such as promotion and remuneration.

Convenience Samples

Harmon and Farmer (1983) reported that 57% of the research subjects in articles printed in the Journal of Vocational Behaviour and the Vocational Guidance Quarterly between 1976 and 1980 were students. This dependence on student populations contrasts with theoretical views which increasingly stress the key role careers play in a person's entire life (e.g. Hall, 1976; Osipow, 1973; Super, 1983, 1988).

Furthermore, in choosing to sample professional people aged 30 to 44, the present study was informed by two contemporary trends in the composition of the work force. Firstly, the age composition of the work force has changed due to the rise in expected life spans and a diminished birthrate. In America, for example, the percentage of 16-24 year olds in the total labour force will decline from 20% in 1986 to 16% in 2000, while the percentage of 25-54 year old workers will increase from 67% in 1986 to 73% in the year 2000 (Hoyt, 1988). According to Luthans and Thomas (1989), the average worker of the 1990's will be the 35-44 year old. South Africa may be expected to follow suit in the longer term. This trend

suggests that the most relevant population for study may ultimately lie within the 25-54 year age group.

Secondly, there is a growing body of people working in a professional capacity (e.g. accountants, engineers and lawyers) and these categories are likely to grow in importance. Strümpfer (1989) reported that 4.1% of South Africa's economically active population fell into the "professional" category in 1970 and that figure rose to 8.21% by 1985. Comparisons with other countries suggest that the proportion of professionals in the labour force will rise further. For example, Sweden had 25.32% of its economically active population employed in a professional capacity in 1980, the USA had 12.72% in 1985, and Australia had 13.64% in 1981 (Strümpfer, 1989). Hoyt (1988) also predicted a trend towards the creation of more <u>new</u> high level jobs than new jobs requiring less than post-secondary education in the 1986-2000 period.

The trend towards professional work may represent a particular problem to organisations. Organisations are likely to remain the major employers of professionals and yet a professional's primary commitment is to his/her profession (Boshoff, 1981). Given that committed employees are assumed to be more motivated, more satisfied, and less likely to leave their firms, a potential lack of commitment among professionals has aroused some concern (Mathieu & Hamel, 1989; Morrow & Goetz, 1988; Morrow & Wirth, 1989).

The present study incorporated populations in the 30-44 age group from fourteen different professional groups in an attempt to accommodate the above concerns. The career stage theories furthermore seemed to support the choice of age group. The emphasis on job satisfaction and job involvement of professionals hopefully contributed to achieving relevance both to professionals and their employing organisations.

Use of Multivariate Statistics

Fitzgerald and Rounds (1989) observed that multivariate studies are critical to understanding vocational behaviour that has multiple antecedents and consequences. Furthermore, they noted with concern that a large number of Type I errors could be discerned in the articles they reviewed.

The present study relies on multivariate procedures it was thus important that care be taken to avoid Type I errors. Precautions included an investigation of the psychometric properties of the measuring instruments (see Chapters Seven and Eight) and the use of the most stringent tests where options were available. For example, the Bonferroni ranges test was used rather than the Tukeys or Duncan tests to reduce the experimentwise error rate (SAS Institute, 1982) Chapter Seven contains more detail in this regard.

The present study then hopefully avoids some of the pitfalls that may be characteristic of much research into

careers. It is theory-based, investigates important subjective variables in an increasingly significant population and attempts to integrate them using sophisticated multivariate statistics.

Better Informed, Better Employed

More precisely, the present study was designed to survey representative samples of fourteen professional groups in South Africa in order to assess their respective and relative career orientations, job satisfaction and job involvement. The objectives were broad and multifaceted. Firstly, they involved an effort to refine the definition and measurement of the career orientation and job involvement constructs, and to assess the validity of the relevant measuring instruments as far as possible. This objective represented both an end in itself and a foundation for further investigation. Secondly, the objectives were to investigate the relationships between the constructs with an ultimate view to showing that both job satisfaction and job involvement may be dependent on an interaction between career orientations and environments broadly classified by professional groupings.

In short, these aims were to measure the satisfaction, involvement and career orientation variables accurately, and to determine the relationship between the variables with relative precision. If these aims could be realised then this

study may provide some tools towards a better informed and better employed populace.

This report is organised as follows. The following chapter (Chapter Two) documents the major traditions in career theory and describes the roots of the career anchor theory. Chapters Three, Four and Five detail the variables under study, namely the career anchors/orientations, job involvement and job satisfaction. Chapter Six presents the research problems and hypotheses in detail. Chapter Seven describes the research methodology. Chapters Eight through Eleven present the research results and some discussion thereof. Chapter Twelve concludes this report.

CHAPTER TWO

BACKGROUND TO THE CAREER ANCHOR THEORY

A career, according to Super (1983) "is a sequence of positions occupied by a person throughout his or her preoccupational, occupational and post-occupational life. It includes work-related roles such as those of student, employee, and pensioner or annuitant" (p. 7). Careers thus provide an extremely broad scope for study, and the literature is a correspondingly voluminous one.

In their investigation of the major contributors to the field of vocational behaviour, Watkins, Bradford, Lew and Himmell (1986) categorised 8997 works cited in the four year period ending in 1984. Whether there are any consistent themes or development in theories of careers is, however, the subject of some debate. Sonnenfeld and Kotter (1982) believed that career theory is developing into a dynamic and cohesive structure. Their paper, however, ignored a great number of diverse studies outside of the four research traditions they identified. For example, the research generated around subjects such as career decision making (e.g. Blustein, 1987; Driver, 1980; Mihal, Sorce & Comte, 1984) and career maturity (e.g. Crites, 1981; Harmon & Farmer, 1983; Super, 1988) are not raised. The observations of Collin and Young (1986) and Harmon and Farmer (1983) that there is little guiding theory

and much diverse and isolated research appear to be of more substance.

Consistency aside, however, there do appear to be two distinct research traditions that together dominate recent reviews of the literature on careers (Collin & Young, 1986; Fitzgerald & Rounds, 1989; Greenhaus & Parasuraman, 1986; Harmon & Farmer, 1983; Osipow, 1987; Phillips, Cairo, Blustein & Myers, 1988; Slaney & Russell, 1987; Sonnenfeld & Kotter, 1982; Super, 1983). These two traditions of theory and research are the differential approaches and the developmental approaches.

The career anchor theory manages to straddle the two approaches and as will become clear, owes a debt to both. This chapter attempts to sketch the background of study out of which the career anchor theory emerged. By comparison with the major research traditions, the unique contribution of the career anchor theory will be silhouetted and a more holistic image of the career may result.

Differential Theories of the Career

Among the first approaches related to the study of careers by psychologists was the differential (or trait and factor) approach seeking to predict performances on specific jobs. The trait and factor approach is based on the assumption that individual differences can be measured and

matched against the differing requirements of occupations (Isaacson, 1985).

The differential tradition may be dated back to about 1890 when the term "mental tests" was first used in the psychological literature by James Cattell (Crites, 1981). However, it would take World War I to spur work classifying the aptitudes required for numerous occupational groups (Sonnenfeld & Kotter, 1982; Super, 1983). Early work focussed on measures of aptitude and ability, but as early as 1918 an interest questionnaire had been developed (Crites, 1981).

The approach is readily applicable as a basis for career counselling and for employee selection and placement (Isaacson, 1985). The enduring popularity of the trait and factor approach in these applications should be seen as support for its practical value. However, the approach is somewhat reactive in that it is based on an assumption that normative interest and aptitude profiles for particular occupational groups do in fact represent ideal requirements for entrants to those groups.

The trait and factor approach remains the subject of much empirical research, particularly into the validity of various individual difference measures (Phillips, Cairo, Blustein & Myers, 1988). The studies of Brookings and Bolton (1989) and Swanson and Hansen (1988) are typical. Brookings and Bolton investigated the factorial validity of the United States Employment Services Interest Inventory among a sample of

disabled people. Swanson and Hansen (1988) tested the long term stability of vocational interests as measured by the Strong-Campbell Inventory.

Along with interests and skill differences, researchers have also focussed on the deeper lying determinants of behaviour, namely needs and values. The concern with the role that values play in human affairs extends from the affairs of nations (e.g. England, 1978; Hofstede, 1976, 1985; Pascale & Athos, 1987; Rowen and Shenker, 1985; Sunter, 1987; Weber, 1958 and Whitely & England, 1977, 1980) through those of various cohorts and organizations (e.g. Boshoff, Smith, Moore and Rautenbach, 1987; De Cock, Bouwen, De Witte & De Visch, 1986; Flowers, Hughes, Myers & Myers, 1975; Pascale & Athos, 1981; Posher, Kouzos & Schmidt, 1985; and Sturdivant, Ginter & Sawer, 1985) and finally to the effect of work values on the lives of individuals.

Research into individual work related values has been multifaceted and somewhat eclectic as the following examples illustrate. Much research has been devoted to operationalising the construct by identifying and measuring different values (e.g. Allport, Vernon & Linzey, 1960; England, 1967; Roberson, Houston & Diddams, 1989; Rokeach, 1968, 1973; Wollack, Goodale, Wijting & Smith, 1971). Other researchers have attempted to distinguish the value construct from those of needs and interests (MacNab & Fitzsimmons, 1987).

The development and crystallisation of values has been the focus of work by Krau (1987, 1989), Pine (1987) and Vodanovich and Kramer (1989). Overlapping with work on the development of values, Bentell and Brenner (1986) and Pearson and Kahn (1989) investigated sex differences in work values.

All these studies are of relevance to the study of career anchors as the central component of career anchors is work values (Schein, 1978, 1985; De Long, 1982a).

From the early 1950's a school of career psychology rooted in developmental psychology began to have increasing influence (Sonnenfeld & Kotter, 1982; Super, 1983). This developmental approach will be discussed in some detail later. The trait and factor approach has benefited from some cross-pollination with the developmental theory, and the more sophisticated approaches span the boundary between developmental and differential career psychology. Barak (1981) and Barak, Librowsky and Shiloh (1989), for example, have proposed a theoretical model of the development and maintenance of interests thus drawing on both approaches.

Space limitations preclude a review of all the differential theories. Holland's (1973, 1985) theory will thus be singled out as illustrative of these theories. Holland's (1973, 1985) theory is an attractive choice for special attention as it is one of the best articulated and most researched theories in the primarily trait and factor mould. Holland's pre-eminence in the field is underscored by

the fact that he was the single most cited author in the vocational behaviour literature between the years 1980 and 1985 (Watkins, Bradford, Lew & Himmell, 1986).

Holland's Theory of Vocational Personalities and Work Environments

Holland's (1973, 1985, 1987) theory deserves special attention among the essentially trait and factor theories because of the enormous amount of research it has generated (Watkins, Bradford, Lew & Himmell, 1986; Fitzgerald & Rounds, 1989), the relatively strong regard in which it is held (Super, 1985; Brown, 1987) and finally (and most relevant to the present study), because of the parallels between Holland's theory and the Career Anchor theory.

Holland's theory is designed to answer three cardinal questions:

- Which personal and environmental characteristics lead to satisfying career decisions, involvement and achievement?
- Which characteristics lead to stability or change in the work people perform during their life times?
- Which methods can provide assistance to people with career problems?

The theory comprises four fundamental assumptions:

Firstly people can be categorised according to six personal dispositions or types.

- The realistic type may be categorised by a system of preferences, competencies, self-perceptions and values that emphasise the rational, practical and concrete.
- The investigative type is concerned with understanding physical, biological, and cultural phenomena through observational, symbolic, systematic and creative investigation.
- The artistic type values aesthetic qualities and expressive, ambiguous, unsystematised activities.
- The social type is predisposed to prefer all spheres of social interaction and problems over more explicit, ordered activities involving materials or machines.
- The enterprising type measures achievements in political and economic terms, and is acquisitive and persuasive.
- The conventional type is ordered, systematic and predictable.

By ordering the resemblance of a person to each of the six types they fall into one of 720 different personality patterns.

Secondly environments can be categorised into six models according to the type of personality that predominates. Thus there are six environmental models mirroring the personality

types - realistic, investigative, artistic, social, enterprising and conventional.

Thirdly people seek environments where they can exercise their skills and abilities, express their attitudes and values, and tackle agreeable problems and roles.

Fourthly behaviour is dependent upon the interaction between personality and environment.

Besides these four key assumptions, Holland described several secondary concepts which have a moderating effect on predictions derived from the main assumptions. These are:

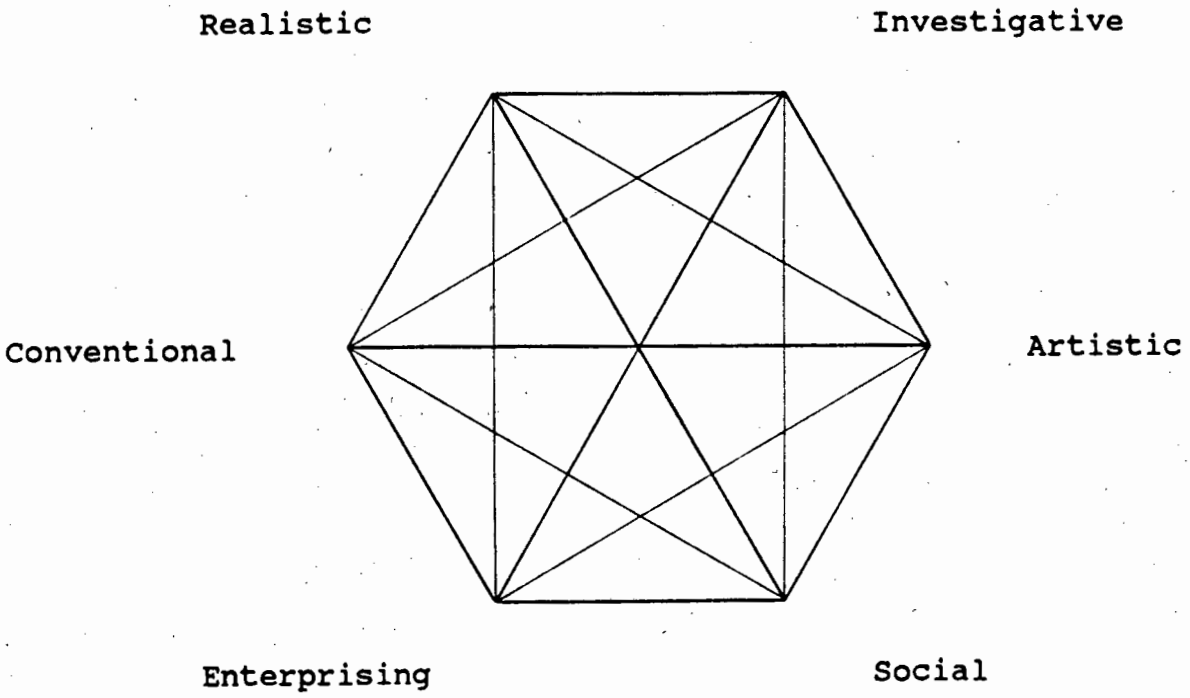
- Consistency: Some types are more closely related than others. For example, realistic and investigative types are more closely related/consistent than others. A person with a more consistent profile of types should be more predictable than a person with an inconsistent profile.
- Differentiation: The more a person or environment resembles a particular type the greater the degree of differentiation. Where there is little differentiation in a personality or environment, predictions are difficult to make.
- Identity: This concept is an estimate of the clarity and stability of a personality or environmental type.

- Congruence: Congruence occurs when a person is ensconced in an environment that matches his/her type e.g. a realistic person in a realistic environment.
- Calculus: This concept defines the internal relationships of the theory according to an hexagonal model (Figure 1). The shorter the distance between any two types (according to the model), the greater their psychological similarity. The model is internally consistent with the other concepts and assumptions that make up the theory.

The gist of Holland's theory has been stated. Holland (1985) develops his concepts further, provides some empirical validation and has developed instruments based on his theory - the Vocational Preference Inventory and the Self-Directed Search.

Various components of Holland's theory have been subjected to empirical tests. Smart (1989) looked at the development of three vocational types and found support for Holland's premise that types develop as a function of a complex series of events resulting from family backgrounds, initial personal orientations and occupational preferences, and interactions with alternative environmental settings (e.g. universities). The relative importance of life events varied among the vocational types.

Figure 1 Holland's (1985) hexagonal model for defining the psychological resemblances among Types and Environments.



Gottfredson (1977) found more consistent occupations (in terms of Holland's model in Figure 1 and his concept of consistency) result in more stability and less redirection in career over a five year period.

The major thrust of study related to Holland's theory centres on the congruence, or person-environment fit, construct. Such is the interest in person-environmental fit research that the Journal of Vocational Behavior has devoted a special issue to the subject, and the American Psychology Association hosts an annual symposium on the subject (Spokane, 1987). This research is of particular importance to the present study. The present study attempts to isolate which career orientations are most conducive to job satisfaction and job involvement in each of fourteen professions. In effect the present study approaches person-environmental fit from a values-profession perspective where career orientations are measured rather than vocational types and the different professions describe different occupational types.

Generally, research has been supportive of the positive effect of a person-environmental fit on job satisfaction but inconsistent as regards job performance (Gati, 1989; Spokane, 1987). Elton and Smart (1988) found person-environment congruence to be related to job satisfaction. Meir, Keinan and Segal (1986) found that the congruence-satisfaction relationship may be moderated by "group importance" as perceived by the individual. They found that the more

important the "group" was the greater the effect congruence had on satisfaction. Taking a more focussed perspective on congruence, Meir (1988) and Meir and Yaari (1988) found congruent speciality choice within occupations to be related to job satisfaction. Finally, broadening the research to consider other work outcome variables, Blau (1987) was able to predict job involvement but not organisational commitment using a person-environmental fit model.

Holland's (1985) theory has also been evaluated in philosophical terms. Generally, the philosophical requirements of a theory are that it should be clearly stated; be parsimonious; explain important phenomena; be comprehensive; generate empirical enquiry; aid in the explanation, prediction and eventually control of the phenomena being explained and account for empirical data generated after the theory was developed as well as current research findings (Brown, 1987; Harmon & Farmer, 1983; Holland, 1987; Osipow, 1973). The Career Anchor theory will also be examined according to these criteria in subsequent chapters.

By and large, Holland's theory has fared well under philosophical scrutiny (Brown, 1987; Holland, 1987), particularly when the purposes for which it was designed are taken into account (Osipow, 1987). However, the relationships between the constructs of consistency, differentiation, and identity, and the definition of identity in organizations have been singled out for criticism as being unclear (Brown, 1987).

There are, of course, other conceptualisations of the identity construct which are clearer and which may enrich further statements of what is after all an evolving theory. For example, Hall (1971) has proposed that a total identity is a composite of images an individual has of him/herself in various social roles. Forrest and Mikolaitis (1986) also have a conceptualization of identity which stresses comparison of self with others.

Trait and factor theories such as Holland's remain a dominant focus in career psychology (Fitzgerald & Rounds, 1989). The Career Anchor theory (Schein, 1977b, 1985) is firmly rooted in this tradition in that a central thrust of the theory is the identification of individual differences in values, motives and abilities. However, Schein's theory differs from the main stream trait and factor theories, in that the individual differences he identifies are not necessarily related to aptitudes for particular work. In fact, work environments are relatively disregarded. The Career Anchor theory rather relates individual differences to differences in career decision making processes and career progression. The debt the Career Anchor theory owes to the trait and factor approach as well as the unique contribution it makes will become clearer when the theory is introduced in greater detail. First though, it is necessary to look at the other dominant research tradition that may have lent impetus to the development of the Career Anchor theory. In fact,

Schein (1977c, 1978) himself has been an eminent contributor to the research tradition to be introduced in the following section.

Developmental Theories of the Career

Developmental theories of careers take a more dynamic approach to explaining careers. The pattern of a career as seen by developmental theorists is a longitudinal one linked to a broader progression of life stages. It is dynamic in that the stages are characterised by changing patterns of developmental tasks, career concerns, activities, values, and needs, which emerge as a person passes through various age ranges (Hall, 1976; Harmon & Farmer, 1983; Osipow, 1987). The emphases in the developmental theories are on time and change, dimensions largely disregarded in the trait and factor theories (Harmon & Farmer, 1983).

Developmental theories of the career may be viewed as a constrained development (in that they have a narrower focus in terms of issues faced and time covered) from the life stage theories to be found in the works of people such as Jung (1933), Erikson (1963), Vaillant (1977), Gould (1972), Levinson (1978), and Sheehy (1976). These theorists see learning and development as a life long process. The process may be broken down into predictable, to within a few years, and sequential stages. Each stage is characterized by

particular challenges and issues which are related to life events such as becoming independent of the family, having children, and dying. The life stages are therefore predictable as they are based on life events that are predictable in broad terms.

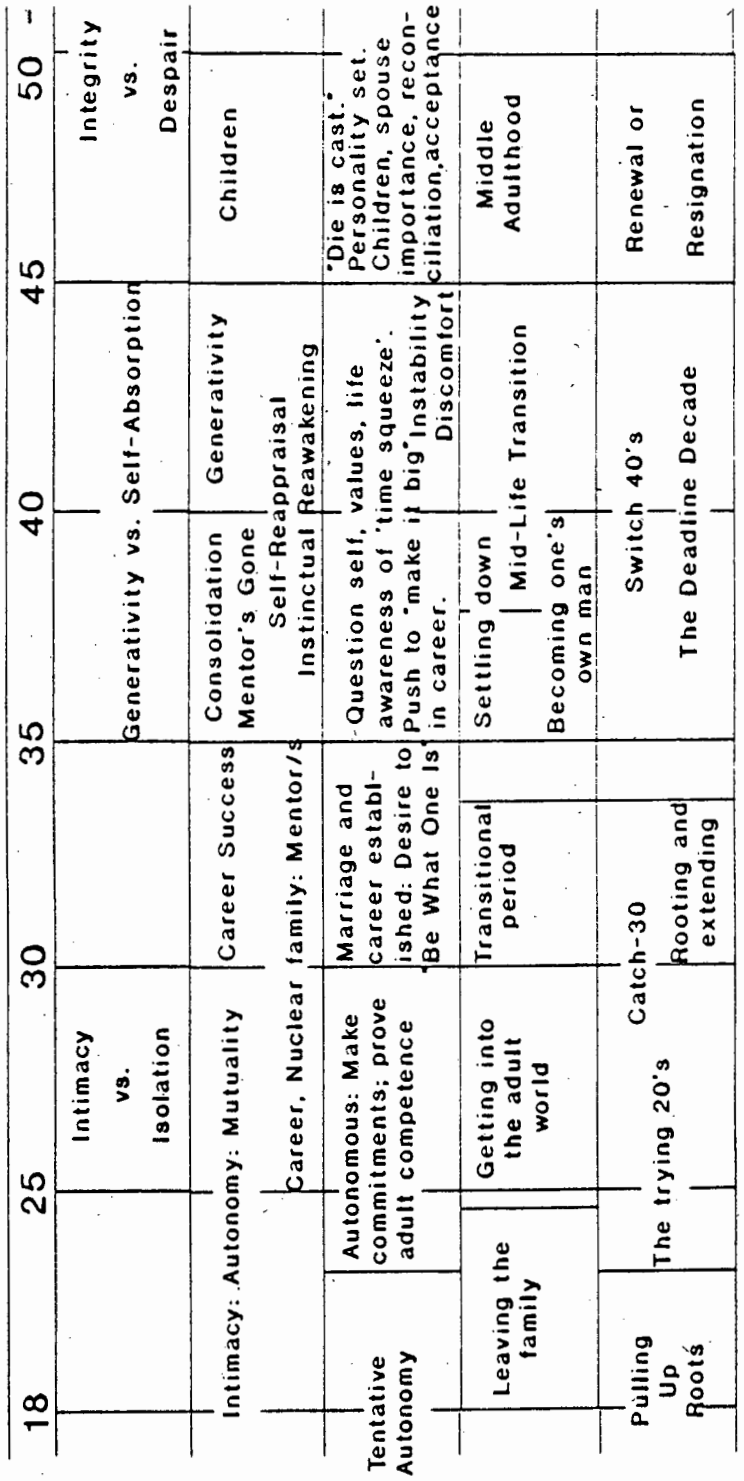
Figure 2 summarises several of the foremost life-stage theories. The common ground between the different theories reflected in Figure 2 gives some credence to the intrinsic validity of the approach. Loevinger and Blasi (1976) reviewed many developmental theories and concluded

> "when many people operating from different assumptions and different kinds of data have convergent conceptions, that convergence confirms the common elements (p. 68)".

The career stage theories that will be introduced shortly have a similar convergent validity.

Credit must go to people such as Super (1950), Miller and Form (1951) and Ginzberg (1952) for being among the first to apply the life stage approach to the study of careers. In common with the trait and factor theorists, Super (1950) and Ginzberg (1952) were primarily concerned with career choice. However, Super and Ginzberg had a subtly different emphasis to their work from that of the trait and factor theorists and that subtle difference ultimately resulted in the development of the two widely divergent approaches to career study.

Figure 2 A Comparison of Several Conceptualisations of Adult Life Stage Development (Adapted from Sonnenfeld and Kotter, 1982).



The subtle difference was that even in the early 1950's Super and Ginzberg regarded career choice as a process. By contrast an apparent assumption underlying much of the work by trait and factor theorist was that a choice was made early on in a career and, if that initial choice (or match between personality and environment) was correct, then it would be correct for a life time. Once career choice was considered a process, the career theorist had to be concerned with where the process began and ended. Super (1950) initially saw career choice as an implementation of one's self-concept.

> "The choice of an occupation is one of the points in life at which a young person is called upon to state rather explicitly his (sic) concept of himself, to say definitely "I am this or that kind of person" (Super, 1950, p. 352).

Super's early conceptualization of the process of career choice thus paralleled the crystalization of a self image - with the major focus on childhood and early adult exploration.

Ginzberg (1952) also described an early career stage theory. His focus was on childhood and early adult years, reflecting the prevailing concern with initial career choice. According to Ginzberg (1952) a child passes through a fantasy period (before 11) where provisional career choices are made on arbitrary translations of impulses and needs. Between 11 and 17 tentative choices are made, taking greater cognisance

of developing interests, capacities and values. Finally, from age 17 onwards realistic choices are made based on active exploration of alternatives and crystallization of choices or delimitation of alternatives.

The career choice process thus had a beginning in early life stages. The career stage theories parallel the life stage theories with the realisation that they are interrelated (Kanchier & Unruh, 1988). The process described thus became increasingly open-ended and increasingly cross referenced to other life stage events. Super's (1988) Life-Career Rainbow model epitomises this development. The model maps nine life roles (child, student, leisurite, citizen, worker, spouse, homemaker and parent) onto the life stages of growth, exploration, establishment, maintenance and decline. Wolfe and Kolb (1980) presented a similarly all-encompassing model although it is less concisely described!

In common with the life stage theories, the various career stage theories tend to describe similar patterns (e.g. those of Miller and Form (1951), Super (1988) and Schein (1987)). Schein's (1987) conceptualization of the career stages (reflected in Figure 3) is an elaboration upon Super's model and is illustrative of the approach.

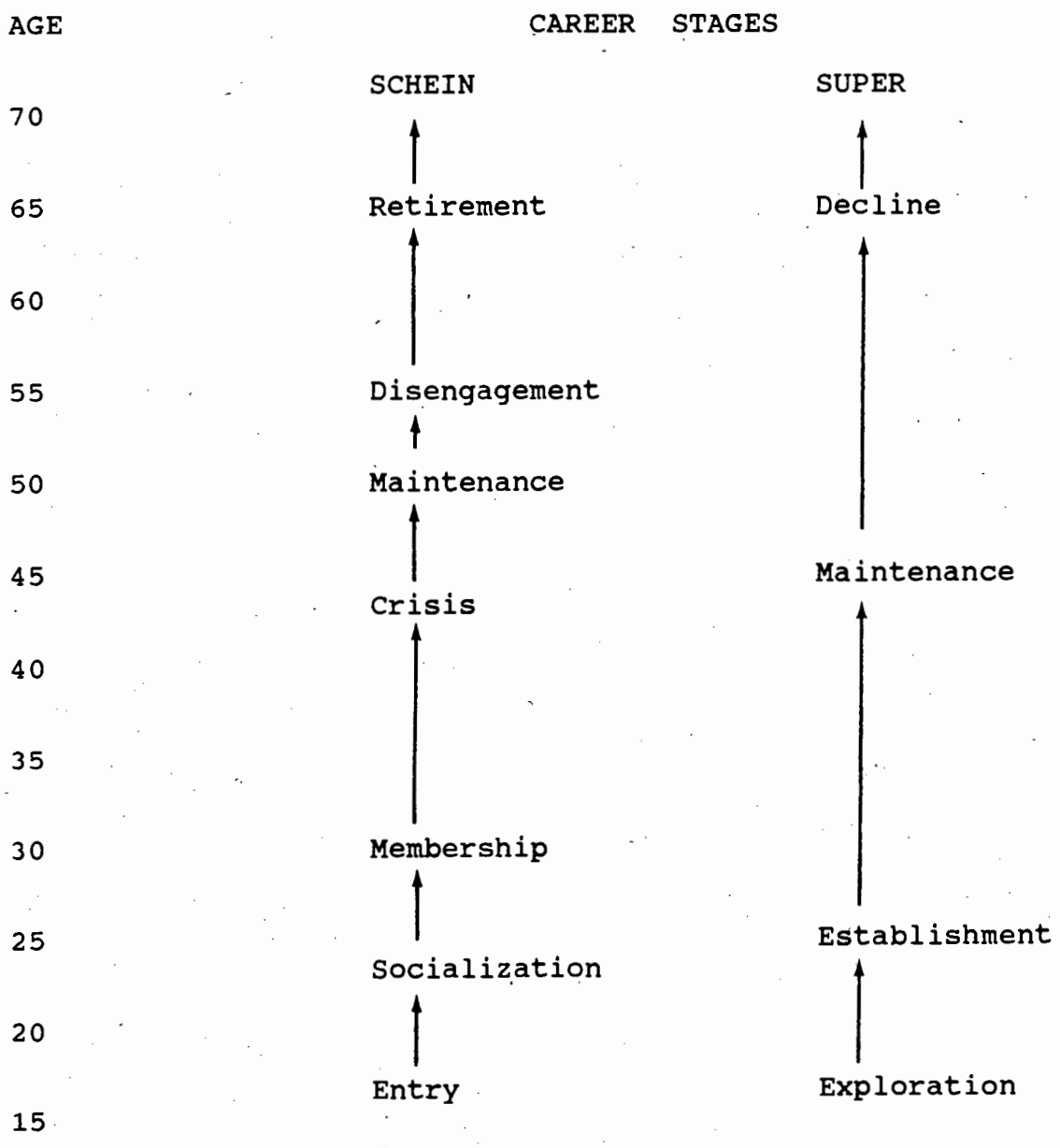
The entry and socialisation stages describe a period of learning and exploration. The individual learns about tasks to be performed, opportunities, capabilities, interests and values and develops a clearer conception of him/herself in

relation to his/her work and the work environment. Mansfield (1971) has researched early career development and his findings underscore an important proviso to career stage theory which is that while people tend to follow the pattern of career stages, they need not consider themselves to be embarked upon a lifelong career. Particularly in the early stages choices are fragile and changes in the social system, nature of the job or obligations apart from work may divert or break a career path. There is thus a subtle distinction between the uniquely individual career paths and the broadly predictable career stages.

The membership stage is a period of establishment where skills are put to use and a personal work space is carved out. It is a period where movement takes place both hierarchically and in increasing centrality or inclusion in the work structure or organization (in Schein's (1977c) terms a radial movement).

Following the membership stage there may be a potentially traumatic period of reassessment, characterized by the recognition of limited time and a sense of reduced opportunities for new starts, by a decline in job performance, and by an increase in job mobility. This urgent reassessment involves self-doubts about initial career choices, present level of attainment and the future. This process of plateauing and possible crisis has been subject to increasing study. Burke (1989a, 1989b), Luthans and Thomas (1989), Patterson,

Figure 3 A Comparison of Two Conceptualizations of Career Stage Development. (Adapted from Schein, 1987 and Super, 1988.)



Sutton and Schuttenberg (1987) and Stout, Slocum and Cron (1988) for example have shown this period to be related to lowered job satisfaction and organizational commitment.

The final stage is a maintenance stage where personal career ambitions are tempered and the individual may derive primary satisfaction from mentoring younger employees (Schein, 1977b). A person in this stage also begins to prepare for disengagement and the final career move - retirement.

The career stage theories may have limited utility value because they are descriptive of very broad changes within uncertain time parameters. Schein's (1978, 1985) Career Anchor theory is complementary to the career stage theories in that it provides a filter structure that makes career movements within the various stages meaningful. The career anchor provides a filter structure by narrowing down the myriad pressures and options facing an individual on a career path to a few meaningful alternatives. The realization of the values and needs that comprise a career anchor furthermore represent a guiding principle within a career. In so doing the theory introduces an element of individual self-determination into the picture of a career where the career stage theories sketch a predictable, common experience of the career.

Thus the career anchor theory may be both compatible to and integral to a developmental stage theory of the career, developing during the exploratory stage of the career (Schein,

1978) and providing a guiding and constraining principle through subsequent career issues and stages.

The career anchor theory is a product of the developmental school in that it fills some of the gaps left by the dominant theories. It also owes more to the developmental approach than to the trait and factor approach in terms of the methodology out of which it was conceived - a longitudinal panel study (described in Schein, 1978).

Conclusion

This chapter has attempted to show that the career anchor theory was not an isolated development, but was born of rich traditions of research into careers. It also attempted to show that the Career Anchor theory in many ways straddles the two dominant research paradigms and it therefore offers some hope of a more cohesive and comprehensive theoretical model of the career.

The following chapter discusses the career anchor theory itself in greater detail, and the two chapters thereafter introduce the remaining variables under study - job involvement and job satisfaction.

CHAPTER THREE

CAREER ANCHORS

The career anchor is a self concept based on self-perceived skills, motives and values that serve to guide and constrain individual career decisions (Schein, 1987a). The theory offers a perspective on normal career developement that is complementary to career stage theories (Brorson, 1986, Schein, 1987a) and, as such offers a powerful insight into career progression as directed and experienced by individuals. The scope of this chapter is a broad one. The career anchor theory is described, and career anchors are distinguished from career orientations. The implications of the theory with regard to the management of individual careers and of people with disparate value systems are considered. The accurate measurement of the career anchors is a primary goal of the study and is consequently examined in detail. Finally, research into career anchors and orientations is reviewed, and the research aims of the present study are presented.

The Career Anchor Concept

The concept of a career anchor emerged out of a longitudinal study, launched by Edgar Schein (1975, 1977, 1982, 1985, 1987) in 1961 and continued through the early 1970's. He studied a group of graduates of the Alfred P. Sloan

School of Management at the Massachusetts Institute of Technology. According to Schein (1975), as the study progressed it became apparent that each individual was orientating his career around an increasingly clear and stable pattern of motivations, attitudes and values.

Schein used the metaphor "career anchors" to describe these patterns as the panelists in the study effectively anchored their career decisions strongly to them. He distinguished the career anchor from the job descriptions and organisational roles and norms which also serve to anchor a career. However it is the psychological anchors that, "not only influence career choices, but also affect decisions to move from one company to another, shape what individuals are looking for in life, and color their views of the future and their general assessments of related goals, and objectives" (Schein, 1975, p.11). Schein hypothesized that the career anchor forms early in individuals' careers during the exploration and establishment stages. The career anchor emerges in part as a product of actual experience and becomes an increasingly stable part of the personality.

In a later, more extensive publication, Schein (1978) brought a further component into his definition of the career anchor, that of "self-perceived talents and ability" (p. 125).

The career anchor then becomes a broad <u>occupational self-concept</u> comprised of the interaction between:

- A perception of one's talents and abilities (based on actual successes in a variety of work settings);

- A perception of one's motives and needs (based on opportunities for self-tests and self-diagnosis in real situations and on feedback from others);

- A perception of one's attitudes and values (based on actual encounters between self and the norms and values of the employing organisation and work setting) (Schein, 1978).

The emphasis here is threefold. Firstly, the career anchor is an occupational self concept or self perception. It is the individual's internalized perceptions about his/her abilities, motives and values, and may be independent of organisational or external definitions of what his/her career is about.

Secondly, the emphasis is on actual experience as a foundation for the self-perceptions. Abilities and values will not be a stable part of the self-concept if they have not been exposed and tested in the light of actual experience. This also implies that the career anchor cannot be identified early in the career as it would only crystalize with accumulated experience.

Thirdly and finally, "the concept emphasizes the interaction among abilities, motives and values in the total self-concept" (Schein, 1978, p. 126). We are motivated to become competent in areas that we value and of course come to value skills we have invested effort in acquiring. One would suffer a great deal of cognitive dissonance if the effort was considered meaningless, and furthermore, one is often positively reinforced for displaying skill. So there is an interaction, and it would be incomplete to speak of abilities or values or motives independently and without reference to the other two dimensions of the construct.

An aspect of Schein's conceptualization of the career anchor which is not readily apparent in the early quotation above, but which becomes cardinal to later formulations of the theory (e.g. Schein, 1985, 1987) is the importance of the stability of the career anchor once it is established. The career anchor then becomes the fulcrum on which all career decisions are balanced. A more recent definition of the career anchor makes this clear. "Your career anchor is that set of self-perceptions pertaining to your (1) motives and needs; (2) talents and skills; and (3) personal values that you would not give up if you were forced to make a choice". (Schein, 1985, p. 28). Derr (1980) gave a graphic representation of this development of a single, stable, career anchor over time. His model illustrated how one career anchor eventually becomes predominant. An important

implication of Derr's model is that other value syndromes are not repressed or withered away entirely. They would continue to play an important, if diminished, role where they do not conflict directly with the dominant anchor.

In his original study, Schein (1975, 1978, also described in Oppler, 1984) identified five career anchors. DeLong (1982, 1984) built on this foundation, suggesting a further three anchors, which Schein has incorporated in his later writing (Schein, 1985, 1987). The motivational/value components of these eight anchors are purportedly measured by the instrument to be used in the present study. Consequently these anchors will be defined in the next section of this chapter. The eight anchors to be described are not presumed to be exhaustive. Researchers have, subsequent to Schein's (1975) paper, investigated various other anchors and these will be referred to briefly when research on career anchors is reviewed.

Managerial Competence

Panelists in this category were motivated to reach a high level in a complex and generalized ideal of management. This ideal centered around control of resources, particularly human resources, and was somewhat removed from specific technical or functional tasks. Schein (1975) saw the managerial competence anchor embracing three components:

-- Interpersonal competence: This represents the ability to influence, supervise, lead, manipulate, and control people toward the more effective achievement of organisational goals.

-- Analytical competence: The ability to identify and solve conceptual problems under conditions of uncertainty and incomplete information.

-- Emotional stability: The capacity to be stimulated by emotional and interpersonal crises rather than exhausted or debilitated by them, to bear high levels of responsibility, and to exercise authority without fear or guilt.

A senior functional manager may be characterized in these terms if s/he is more satisfied by the managerial and human relations responsibilities of his/her job than by the technical part.

Technical/Functional Competence

Panelists in this category were motivated by and anchored to the content of the work they performed, for example financial analysis or systems analysis. A promotion would not be valued by a person with this anchor if it meant that s/he

would no longer perform the actual tasks associated with the technical or functional area. Panelists in this category derive their identity from the exercise of their technical skills.

Security

An overriding concern identified by a number of panelists in Schein's original study could be described as a security anchor. This concern was expressed either as a need for job security (to be linked to a particular organisation in a stable and consistent manner) or as a desire to remain in a particular geographic area, rooted and secure in a community. The aim of an individual anchored in security is to stabilize the total life situation. Although this may be expressed as either a concern for job security or geographical security, Schein (1975) believed these to be expressions of a common underlying need.

An individual concerned with job security will accept an organisational definition of his/her career which an individual concerned with geographical security would not do if the organisational definition required a transfer from his/her preferred community. Under those circumstances s/he would rather change employers in order to remain in that community.

Entrepreneurship

This anchor was originally named "creativity" (Schein, 1975). It describes a need to create and build something that is entirely one's own. It may be a new business, a new product, or a new service, but whatever it may be, it would be an expression of the creator and the creator may be identified by it.

In Schein's panel, people with this anchor were also characterized by a desire to make a great deal of money. Schein contends, however, that this was not money for its own sake, but rather money as an index of success as an entrepreneur. Throughout the conceptualization of the career anchor, Schein has eschewed the idea that making money might be a pure motive. Instead, such an ambition is presumed to mask a deeper need, for example, for security or autonomy.

Autonomy and Independence

People with this anchor were primarily concerned with their own freedom and autonomy. They "found organisational life to be restrictive, irrational, and/or intrusive into their private lives" (Schein, 1975, p. 17). They tend, therefore, to orientate their careers away from the constraints of organisational life. They seek careers such as academic or consulting careers which are characterized by a

large degree of freedom and independence in the acceptance and execution of tasks.

Service/Dedication

The primary concern of people with this anchor is to realize some value for the common good, by fulfilling an ideal of service, and by dedicating themselves to a cause. This ideal of service might equally be expressed by service to individuals or by service to broader social and community groups. One might expect members of the helping professions or of the Greenpeace organisation, for example, to anchor their careers in just such an ideal of service.

Pure Challenge

The career of a person with this anchor is driven by a constant need to face new challenges. It is purely the aspect of challenge that motivates this person, regardless of whether s/he find the challenge embodied in an opposing individual, or a difficult technical or abstract problem, or even in a tough physical obstacle.

Lifestyle Integration

An individual with this anchor has a broad perspective, and self concept that encompasses and integrates his/her family life, work life, and concern for self development. Not only his/her career, but every aspect of his/her life style is constrained by the desire not to let any facet dominate.

The career anchor theory has been described in some detail. In terms of Osipow's (1973) hallmarks of a good theory introduced in the previous chapter, it fulfills the criteria of elegance, consistency and parsimoniousness. The remainder of this chapter provides evidence that the theory fulfills the further criteria. In the next section the practical implications of the theory are considered - in a sense weighing the same theory up against Osipow's (1973) third criterion, whether explanations provided by the theory lead to a better understanding of certain events.

Practical Implications of the Career Anchor/ Orientation Theory

Guth and Taguiri (1965) declared that managers and employees are often unaware of the values they possess and misjudge the values of others. They go on to say that "the executive who will take steps to better understand his own and other men's values can gain an important advantage in

developing workable and well-supported policies" (p. 124). Twenty years later, that statement is as valid as ever and of particular relevance to South African organisations struggling with a shortage of high level and professional manpower (Strümpfer, 1989). To attract and retain professional staff, organisations may have to place greater stress on matching their needs, with the interests and values of their employees (Derr, 1980).

For the individual, on the other hand, the ability to define the criteria by which personal success may be measured may facilitate effective goal setting, motivation and contingent satisfaction (Derr, 1980).

From both the individual and organisational perspective, career anchors may provide insight into the stable and salient values and motivations governing individual decisions and experience. It is with that assumption that the practical implications of the career anchor theory are examined, first from an individual and then an organisational perspective.

The Individual Perspective

Of the decisions made during a career perhaps none are as personally important as the decisions people make about their own careers. Personal satisfaction on the one hand and effectiveness on the other may both be contingent upon identifying an appropriate area of contribution (Derr, 1980).

An area of contribution may be defined in broad terms (e.g. a helping profession, the legal profession or an engineering related field) and in narrower terms of how the contribution will be made within that field. For example, project management and research and development functions may be alternatives within the engineering field, but would complement different value systems. Unfortunately though, as both Guth and Taguiri (1965) and Schein (1985) pointed out, people seldom have a clear idea of what their important values really are, and may be persuaded into choices that later turn out to be mistakes. For example, one might feel pressured into accepting a promotion into a managerial job from a technical one although your values actually have a 'technical orientation'.

In short, the implications of the theory for the individual is that, with an eye on personal values, career choices may be easier, more consistent and may result in a more satisfying future.

To this end, this research will, firstly, attempt to refine the career orientation measuring instruments and, secondly, explore whether particular professions are associated with specific career orientations. Although any profession could probably accommodate more than one value orientation, it is intended to show, by relating the career orientations to job involvement and job satisfaction, that some value orientations are more appropriate than others.

The Organisational Perspective

Much of the research into career anchors has been rationalized in terms of contributions to managerial thinking and practice. These implications will be described firstly from a macro-managerial perspective, where top management value orientations impact on corporate strategy and management style, and secondly, from the perspective of a manager managing individual subordinates with various career orientations.

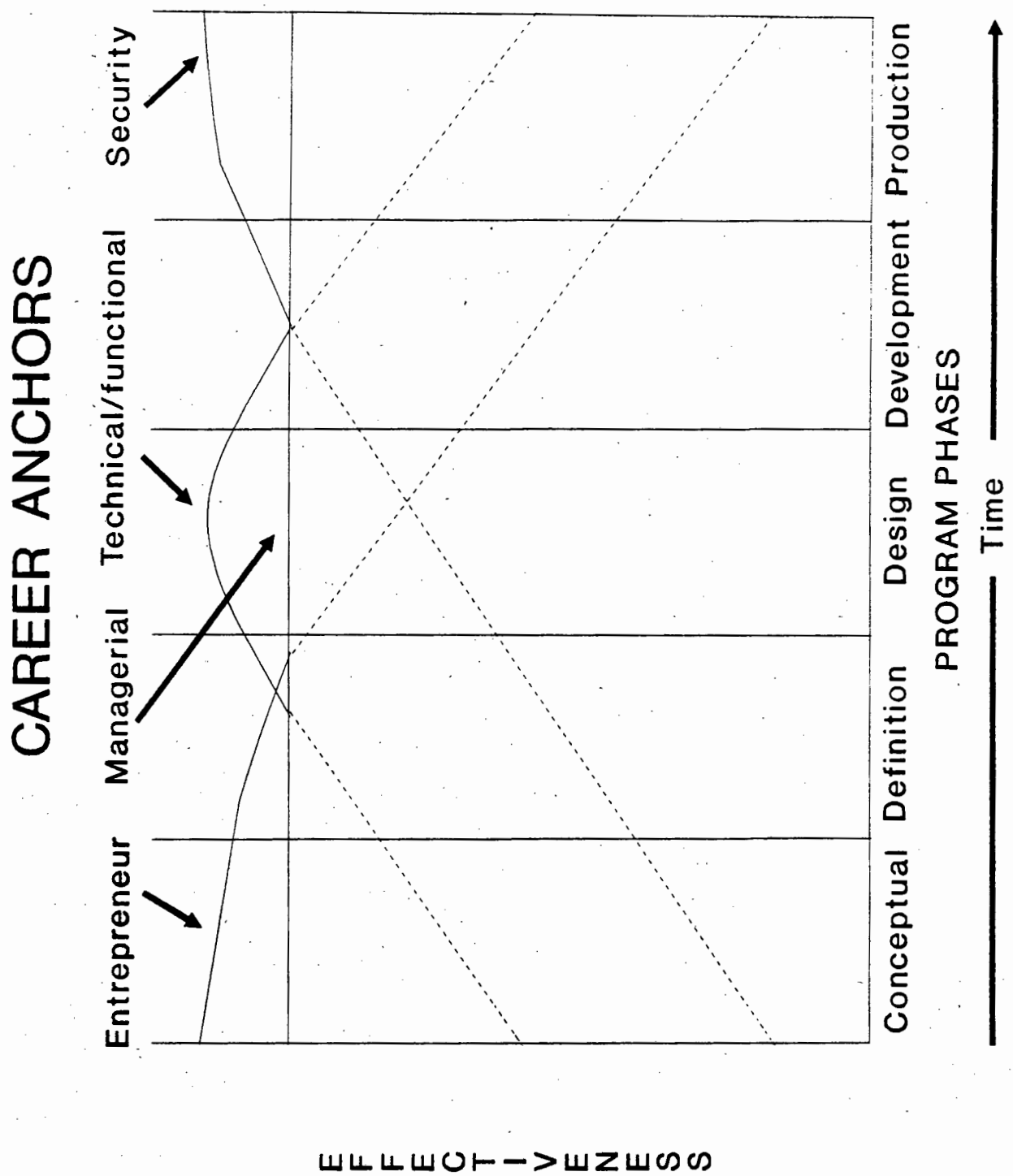
At a macro level, corporate strategy may reflect the predominant orientations of the top management team. It is unlikely for example, for a predominantly security orientated management group to guide their company into a period of aggressive expansion. In fact, as Guth and Taguiri (1965) might have contended, it would be unwise for a management team to choose a strategy so out of keeping with their value system that they might lack the confidence and mind set necessary to communicate and maintain their policy. On the other hand a project team might consist of individuals with a number of different orientations who might, following Hall and Thomas (quoted in Schein, 1987) be employed creatively and productively at various design stages (see Figure 4). They postulated that the effectiveness and satisfaction of a program manager would vary according to how well his career

anchor matched the requirements of program phases. So a manager with an entrepreneurial anchor would ideally manage the creation phases of a large program, whereas technically/functionally anchored managers might focus in the design phase and so on.

A similar model which also spans the distinction between the macro and micro managerial perspectives proposed earlier is that of Bailyn (1982). Her model describes the optimal assignment of employees in each of three career orientation categories (these are broad categories which she describes as "technical", "people" and "nonwork" orientations) against two performance categories (high effectiveness and low/ordinary effectiveness). This model is reflected in Table 1.

Turning to the micro perspective of managing employees with disparate career anchors, these value syndromes may be seen as the driving force behind motivated behaviour, and consequently a career path and reward structure may be salient only in as far as they are congruent with an individual's career anchor/orientation. Schein (1987) explored the implications of each career anchor in terms of the ideal type of work, pay and benefits, promotion system and type of recognition dictated by each. Hughes and Flowers (1973) produced a similar analysis using a sophisticated approach whereby six different value systems were tied to appropriate motivational and maintenance strategies, following Herzberg's

Figure 4 Programme Manager - career anchor model. (Adapted from Schein, 1987.)



framework. Given any particular career anchor and a framework such as Schein's or Hughes and Flowers' the managerial implications follow logically, as the example that follows will demonstrate. The example of the implications for management in dealing with a security anchored individual is used for illustrative purposes. Similar analyses may be performed for each of the career anchors (see for example Schein, 1987a).

Managerial Implications of the Security Anchored Employee

Type of Work. The person with a security orientation is concerned that his/her work is stable, predictable, and performed in a comfortable environment. Extrinsic factors such as improved pay, working conditions and benefits would be more important to the security-anchored person than factors such as greater challenge or variety.

Pay and benefits. The security-anchored person prefers to be paid in predictable increments based on length of service. Preferred benefit packages would emphasise facets such as insurance and pension schemes that provide long-term security.

Promotion System. The security-oriented person would prefer a predictable promotion policy based on seniority and length of service. A published grade or rank system giving

TABLE 1: Midcareer Organisational Roles

MID CAREER ORIENTATION AT	Organisational Evaluation of Effectiveness: High	Organisational Evaluation of Effectiveness: Low ("ordinary")
TECHNICAL	Cell 1 Independent Contributor Trouble Shooter Idea Innovator Internal Entrepreneur	Cell 2 Technical Support Expert on formatted tasks Master
PEOPLE	Cell 3 Top Management Sponsor Generalist Policy Development	Cell 4 Mentor Individual development functions Coach
NONWORK	Cell 5 Specialist Internal Consultant Scanner Scenario Planner	Cell 6 Routine Tasks Part-time work

(Adapted from Bailyn, 1982)

experience requirements or a formal tenure system would be welcomed.

Types of recognition. The person anchored in security/stability wants to be recognised for loyalty and steady performance, ideally with reassurances of further stability and continued employment. "Above all, this person needs to believe that loyalty makes a real contribution to the organization's performance" (Schein, 1987, p. 163).

As Schein (1987) pointed out, most personnel strategies are geared to the kind of person described here. However, they will have to become more flexible if companies are to encourage people with other valuable orientations such as entrepreneurial, technical/functional, or managerial orientations.

Empirical Support for the Career Anchor/Orientation Theory

Studies using DeLong's Career Orientation Inventory or derivations thereof to identify career orientations will be summarised separately as they relate directly to an aim of the present research, and that is to investigate the validity of that instrument.

To date little empirical research has been done on career anchors and orientations. Much of the literature has

concentrated on theoretical issues and that literature has been substantively covered. The research that has been undertaken has either focussed on identifying career anchors for various groups or, less frequently, on relating career anchors within particular groups to variables such as job satisfaction and career decision making. These research traditions will be summarised in turn.

In an early study identifying the career anchors of a particular work group, Derr (1980) and associates interviewed 154 naval officers and compared the career anchors they identified with those of Schein's original sample of MIT graduates. Not surprisingly, they found a somewhat different profile of career anchors in their sample to that of Schein's. The predominant differences were the greater managerial and security orientations of the naval officer group. The managerial bias was explained as due in part to the technical orientation of MIT graduates and in part to the leadership or command orientation of naval officers. The career anchors they identified differed slightly from those described by Schein and they identified a further anchor that categorized eight percent of their sample, a profile they called the warrior. This describes a person whose demand for adventure and action is a basic psychological requirement. Of those who could be classified according to Schein's (1975) originally proposed anchors, 36% had technical, 34% managerial, 4% autonomy, 10% creativity and 16% security anchors. In his

later work Derr (1986) focussed on five orientations labelled "getting-ahead", "getting-secure", "getting-free", "getting-high" (analogous to the warrior profile) and "getting-balanced".

Schein (1987) summarized the results of fifteen similar studies, conducted by himself or by his masters' students. This data is reflected in Table 2. The service, challenge, lifestyle, and identity anchors have only been hypothesized relatively recently, and some of the studies Schein reports may not have considered them.

In the second research trend identified, Eastwood (1980) and Laber (1982) have related career anchors to job satisfaction. Eastwood, in a study of 113 managers and technical people from a computer systems manufacturer found that job satisfaction was significantly greater for a group where their job categories and career anchors "matched" than for a group where the career anchors and job categories appeared to be incongruous. However, this relationship was moderated by the respondents' level of self-esteem. Where self-esteem was low, or not controlled for, no significant differences between the groups were found. Also relating satisfaction and career anchors, Laber (1982), in a sample of public school teachers in New York State, found that respondents experienced their satisfactions and dissatisfactions from different potential satisfiers and that these differences related to the different career anchors.

TABLE 2: Frequency of occurrence of different career anchors in different groups.

Group Studied	Anchor category (Percentages)								
	Security	Autonomy	Technical/ Functional	Managerial	Entrepreneurial	Service	Challenge	Lifestyle	Identity
1961,1962,1963 Sloan School alumni panel (N 44)	9	16	43	18	14	0	0	0	0
Alumni of Sloan Fellows Program (5-10 years out: N 40)	25	10	25	25	15	0	0	0	0
MIT Senior Executive Program 1976 (N 20)	0	0	70	30	0	0	0	0	0
Sloan School alumnae (5 or more years out, 1980,1981; (N 40)	10	5	8	32	12	8	0	5	20
High potential women, middle managers (5-20 yrs. out; N 20)	0	35	0	35	15	5	0	0	10
Upper-middle managers in one Bell System Co. (N 20)	5	10	35	50	0	0	0	0	0
Senior managers in five large companies (N 24)	0	0	42	58	0	0	0	0	0
Field service managers who started in 1969 (N 20)	25	0	10	60	0	5	0	0	0
Aerospace Program managers in five large companies (N 28)	29	4	39	14	14	0	0	0	0
Data-processing professionals in one large company (N 23)	13	0	48	26	4	0	0	0	0
Sloan School graduates in finance jobs (4 yrs. out; N 15)	7	0	67	0	0	20	0	7	0
Female bank vice-presidents in one large bank (5 yrs out; N 20[a])	20	0	35	20	0	5	0	0	0
Senior management consultants in one firm (N 20)	5	30	0	25	0	10	30	0	0
Strategy and management consultants, several companies (N 20)	0	10	15	5	5	15	10	15	25
Physicians who had left traditional medicine to go into management (N 14)	0	36	21	0	29	14	0	0	0

[a]This group included a number of minority members who had come in under affirmative-action programs.

Two studies have looked at career aspirations of engineering students and related them to their career anchors. Taylor (1979) found social class to be related to career anchors, and career anchors in turn to be related to intra-occupational choice. Taylor looked at four orientations, managerial, technical, monetary and autonomy, and found in general that those of higher social class tended to see their careers as involving managerial advancement, while those of lower social class seemed more oriented towards technical aspects of engineering work.

Rynes (1987) surveyed 284 students regarding their long-term career aspirations and found these to be related to their career anchors. Both these studies of student populations should be interpreted with some caution, given the assumption that career anchors only stabilize over time and with actual work experience. In fact, Taylor also found that the length of time worked related positively to the strength of a technical orientation, indicating that for some of his respondents the career anchors may not have been rigidly established. Furthermore, a hypothetical monetary anchor may be problematic (as has been discussed) as it may mask other more salient needs, for example, for security or recognition.

In the final study to be reviewed in this section, Burke (1985), in a study of 426 police officers, related four career orientations (social activists, self-investor, careerist, and artisan) to a measure of Type A behaviour. He found Type A

behaviour to be positively related to careerist and negatively related to self-investor and artisan orientations. He also found significant differences between men and women. Type A behaviour was positively related to social activist and negatively related to self investor orientations among women, but positively related to careerist and negatively related to artisan orientations among men.

Measurement of Career Orientations

A hallmark of a good theory is that it is empirically testable (Osipow, 1973), and DeLong's (1982a, 1982b) instrument goes some way to ensuring that the career anchor theory may be tested. The accurate measurement of career orientations was the cornerstone of the present research project, and a major objective in itself. It is thus necessary at this stage to introduce DeLong's (1982a, 1982b) instrument - the Career Orientation Inventory - and to make a preliminary assessment of its validity. Consequently, in the following sections, the instrument is described, a review of research using the instrument is presented, and the validity and reliability of the instrument is considered.

The Career Orientation Inventory

The Career Orientation Inventory consists of nine subscales measuring different syndromes of self-perceived needs, attitudes and values (DeLong, 1982a). As it does not measure self-perceived talents, it describes a more general career orientation rather than a specific career anchor. The inventory initially measured eight orientations, namely technical competence, autonomy, service/dedication, identify/status, variety, managerial competence, security and creativity. The instrument has subsequently been refined using factor analytic techniques and different samples.

The latest available version of the Career Orientation Inventory (Schein, 1985) was used in the present study. It measures nine career orientations and differs from earlier versions in the following respects. Geographic security and job security are measured separately, having been shown to be factorially distinct (DeLong, 1982b). "Variety" as an orientation has been reinterpreted and redefined as "pure challenge", and "creativity" has similarly been redefined as "entrepreneurship", although the actual scales remain substantially unchanged. Finally, "identity" appeared to be closely related to "security" and has been replaced entirely with a scale measuring an hypothesized "lifestyle integration" orientation.

Each orientation is measured by five items on a ten point Likert type scale, except job security and geographic security which have three items each. The final orientations then are as described earlier in this chapter under the heading "The Career Anchors".

Studies Using the Career Orientation Inventory

Although the instrument was developed in 1982 (DeLong, 1982a, 1982b), there is a paucity of research using the inventory and what there is seems to lack direction and coherence. The research that will be described has however tended to support the criterion validity of the instrument.

Van Blaricum and Beukes (1986) studied South African student populations and Slabbert (1987) studied MBA graduates. Both studies used DeLong's original instrument and included factor analysis of the instrument using their South African samples. In both cases the authors failed to retrieve factors identical to DeLong's, but decided that the obtained factor structure was close enough to that reported by DeLong (1982a, 1982b), to use and interpret the instrument as DeLong had.

In their study, Van Blaricum and Beukes (1986) surveyed 2449 engineering students from universities around the country, and found that different career orientations were associated with different study directions within the field. Results of a correspondence analysis were as follows. Civil,

mechanical and electrical engineering were associated with the entrepreneurial anchor. Chemical engineering was associated with the variety orientation. Industrial engineering was associated with the managerial orientations. Electronic and agricultural engineering were associated with the technical/functional competence orientations. Finally agricultural engineering was also associated with the geographical security anchor. The authors considered these associations to be as one might predict given the nature of the various disciplines.

These findings are somewhat surprising given Schein's (1977) assertion that career anchors only stabilize over time and with actual work experience. Consequently, one might not have expected such a clear and logically consistent distribution of career orientations amongst university students.

Slabbert (1987), however, in a similar finding showed career orientations to be related to the occupations of MBA/MBL graduates much as one would expect given the definition of the career orientation and the stereotypes of various career options. For example, in a correspondence analysis, human scientists grouped near the service/dedication and autonomy orientations. Educationalists grouped close to a security orientation. Finally, general managers were plotted close to the entrepreneurial orientation, but at the furthest extreme from the technical/functional orientation. She also

found that career orientations were related to employer sector in theoretically satisfying directions. Public sector employees had service and security orientations, private sector employees had managerial and identity orientations and self-employed respondents had autonomy and entrepreneurship as their career orientations.

In a further South African study, Van Vuuren, Fouché and Verwey (1989) found the most prominent orientation of accountants to be managerial competence.

Burke (1983) studied 122 male and female, lower level managers with an average age of 29 years. The managerial orientation was significantly and independently correlated with the Type A and Hard Driving scales, although the common variance was not very large (of the order of between 9 and 12 percent). He also found differences between men and women. Among women, higher scores on the Jenkins' scales were always correlated positively with a wide variety of career anchors while, among men, they were positively related to the managerial orientation but negatively related to other orientations.

DeLong (1984) used his instrument to compare the career orientations of 377 urban and 153 rural educators. Although he found rural and urban teachers to have similar orientations, two distinct groups (unrelated to their urban or rural location) with different values did emerge from the study. One group had a managerially and autonomy oriented

value system, and the other group was more security and technically oriented. DeLong discussed the implications of this finding in terms of meeting the different needs of teaching staff.

In the final study to be reported in this section, Wood, Winston and Polkosnik (1985) measured both the career orientations and level of professional development of 65 student affairs professionals. Professional development was measured in terms of four stages, namely, formative, application, additive and generative. They found that professional development could be related to high creativity, medium technical/functional competence, and low geographical security and variety orientations. They considered this a reasonable profile of the student affairs professionals most likely to reach the generative stage of professional development. They suggested that professionals reaching that stage of development would have broad interests in the field, moderate concern for developing expertise in programme and service areas, a willingness to relocate for career advancement and finally a low need for variety. The low need for variety relates to the relatively homogeneous nature of educational institutions. Furthermore, they found that those who remained in the field had lower autonomy and lower geographic security orientations than those who left the field. This is understandable if one considers that educational institutions tend to be fairly bureaucratic.

Added to that a move to another college or university may be the only means of career advancement for student affairs professionals.

Reliability and Validity of the Career Orientation Inventory

The literature reviewed provided ambiguous evidence of the validity of the Career Orientation Inventory. Of particular concern was the apparent structural instability of the instrument given the results of the Slabbert (1987) and Van Blaricum and Beukes (1986) studies, both of which returned different factor structures for the instrument. In a similar vein, Bluen and Barling (1983), in a factor analysis of the widely used Survey of Work Values (Wollack, Goodale, Wijting & Smith, 1971) have shown that work values applicable to an American sample were not applicable to their sample of White South African males. It was subsequently decided to assess the validity and reliability of the instrument with particular circumspection.

The version of the Career Orientation Inventory (Schein, 1985) used in this study is a revision of the instrument described in DeLong's (1982a, 1982b) instrument.

No information on the reliability and validity of the revised instrument was available. Conceptually, this instrument is, however, essentially the same as the previous version of the inventory and thus it was reasonable to assume

that its psychometric properties would be similar to, if not better than those of the original instrument. This discussion then centres around the original inventory unless otherwise stated.

Reliability

The reliability coefficients for the original eight subscales are reported in Table 3. These are test-retest reliabilities. The time interval between the test and the retest was not reported, nor were the internal consistencies of the scale. According to Anastasi (1976) a desirable reliability coefficient would usually fall in the .80's and .90's, which is the case for most of the subscales. Furthermore, reliability estimates are, all else being equal, positively related to the length of the scale (Anastasi, 1976). Given firstly that the subscales are relatively short (five or three items each) and that reported reliabilities are thus likely to be underestimates and secondly, the exploratory nature of the present study, the reported reliabilities were considered more than adequate at the outset of the present study.

TABLE 3. Test-retest reliability coefficients of the Career Orientation Inventory subscales. (According to DeLong, 1982b).

Career Orientation	Reliability Coefficient
Technical competence	.71
Autonomy	.83
Service	.74
Identity	.74
Variety	.83
Managerial competence	.91
Security	.84
Creativity	.83

N = 73

The reliability of the scales as used for the present sample will be reported in Chapter Eight.

Validity

Validity of the instruments will be discussed in terms of criterion, construct and content validity. This approach was chosen as a convenient and traditional framework for considering validity, but it must be stressed that this does not imply that it was accepted that validity can simply be broken down into three distinct entities nor that these three concepts cover the construct exhaustively. (For example, criterion and content validity both rely on, and overlap with, construct validity.) Rather, a more contemporary philosophy underlay the evaluation. Two tenets might characterize that philosophy. Firstly, "validity is neither a single number nor a single argument, but an inference from all the available evidence" (Guion & Gibson, 1988, p. 350). Secondly, "the nature of validity varies to a greater or lesser degree as a function of the specific questions being asked" (Zedeck & Cascio, 1984, p. 489).

Construct Validity

It seems presumptious to criticize the construct validity of an instrument developed (in conjunction with DeLong) by the originator of the construct! However, in a personal

correspondence with the co-supervisor of the present study, Schein (1987b) himself expressed some reservations.

By definition, the career anchor is "that element in our self-concept that we will not give up, even if forced to make a difficult choice" (Schein, 1987a, p. 158), and given this characteristic of the construct, Schein (1987b) suggested that a forced choice format may have been more appropriate for the inventory. The choice of format is an extremely complex issue. While a forced choice or ipsative measure (in which each value is measured at the expense of the others) would be more compatible with the underlying theory, it must be borne in mind that the theory is as yet unproven.

An ipsative measure would result in an apparent dominant career orientation which may be an artifact of the methodology, even if a hierarchy of values, for example, is a more accurate description of actual cognitive mechanisms. Furthermore, an ipsative measure would be subject to substantial analytic limitations where between-subject comparisons are made. As the score for each value (or hypothetically, orientation) would be determined by the scores for all other values (orientations), correlations between value (orientation) scores would be meaningless (in the case of two sub-scales, $r = -1$). Correlations with other variables would also be constrained by the deterministic relationship between value (orientation) subscales (Ravlin & Meglino, 1987). An advantage of ipsative type measures are that they

are less susceptible to bias due to social desirability than are the summated rating scales used in the Career Orientation Inventory (Ravlin & Meglino, 1987). In the light of all these arguments, it might be concluded that what the present format lost in construct validity (the essence of Schein's (1987b) argument) it made up for in practicality and flexibility.

As a whole the Career Orientation Inventory is open to a further criticism due to the methodology of simply taking the highest score out of the nine scores for the individual subscales as indicative of the respondent's exclusive career orientation. Anastasi (1976) argued that IQ scores yielded by alternative tests are not comparable, certainly where normative data for each of the tests are unavailable. Similarly, the Career Orientation Inventory effectively consists of nine independent scales, for which no normative data exist, and to compare scores on one career orientation with scores on another appears meaningless.

For the Career Orientation Inventory to be considered valid each of its constituent scales should be valid independently. In this light the lifestyle integration scale might be singled out for criticism on fundamental theoretical grounds. Given the definition of a career anchor, it is contended that an hypothesized lifestyle integration anchor would lack construct validity on two grounds.

Firstly, it does not describe a work related attitudinal/motivational syndrome so much as the importance of

one's career relative to other aspects of one's lifestyle. In this the focus is too broad and diffuse, describing the position of the career within one's total life space, and not in line with the career focus of the construct.

Secondly, the idea of an integrated lifestyle as a career anchor may in any case be something of an anathema to the central precept of the career anchor theory - that there is one motivational/attitudinal syndrome that you would choose above others if forced to make a difficult choice. The proposed lifestyle integration anchor assumes a diversity of motives and values and, by definition, the person with this anchor will not choose among them.

A note on "Anchors" versus "Orientations". The present study measures career orientations, but hopes also to throw some light on the career anchor theory. It may be worthwhile then to consider how these constructs differ and whether it would be valid to consider career orientations as analogous to career anchors under certain circumstances.

The difference between the career anchor and career orientation constructs is one which invites some confusion. Effectively, a career orientation lacks the self-perceived talent component of the career anchor. However, it may be feasible to consider the measured career orientations as analogous to career anchors for some of the analyses proposed

for the present study, due to the nature of the professions sampled.

Most of the professions sampled have rigorous standards of training and skill, which have to be met before people can be registered as members of a particular professional group. Effectively then, skill levels are standardised within each group. Furthermore, as the samples are limited to professionals over the age of twenty-nine, respondents will have aligned themselves to, and practised in, their professional area for a number of years. Given these facts it is likely that, within professional groups, respondents will have similar self-perceptions of their talents and abilities.

It is this self-perception, of ability and skill, that distinguishes the career anchor from the career orientation and consequently (as it appears to be held constant within professional groups), where professional groups are examined individually it seems reasonable to consider the measured career orientation to be analogous to a career anchor! Conversely, of course, where comparisons are made across professional groups, the self-perceived talents component of the career anchor would not be held constant and the variable measured may only be described as a career orientation.

Criterion validity

The few studies that have used the Career Orientation Inventory have tended to support the criterion validity of the instrument. These studies were detailed earlier in the chapter. Van Blaricum and Beukes (1986) and Slabbert (1987) both related study directions to career orientations and found associations that might be expected given the definitions of the orientations. For example, Slabbert (1987), in her correspondence analysis found that the human scientists in her sample grouped near the service/dedication orientation. Furthermore, Wood, Winston and Polkosnik's (1985) study also provided evidence of criterion validity. They found that levels of professional development and intentions to remain in the field of student affairs were related to career orientations.

Content Validity

Two methods suggested themselves as measures of content validity. One is the judgement call of face validity - does the instrument appear to be measuring the construct under investigation and does it appear to sample the content domain of the construct adequately? The second approach is to use the more sophisticated factor analytic techniques that identify the underlying dimensions being measured.

As regards face validity, the nine scales measure orientations congruent with Schein's (1985) theory while their component items appear to ask the appropriate questions.

Two of the studies reported earlier have investigated the factor structure of the original inventory for a South African sample. Slabbert (1987) in her study of MBA/MBL graduates (N = 1005) and Van Blaricum and Beukes (1986) in their study of 2449 engineering students retrieved patterns of nine factors in factor analyses of the inventory. Unfortunately, the patterns retrieved in those two studies were not identical to the nine orientations the inventory proposed to measure! In both the Slabbert (1987) and Van Blaricum and Beukes (1986) studies, five factors were retrieved that were consistent with five of the inventory subscales, and overall, the factor pattern was similar to the original scales. However, two "creativity" items loaded higher on the "variety" scale and a "service" item loaded more highly on a managerial factor. Both authors considered the factor pattern similar enough to the original patterns to use Schein's (1985) method of calculating scores on the different career orientations.

These then were the data available when the decision was made to use the Career Orientation Inventory. Clearly the Inventory was not perfect as regards its psychometric properties. However, it was hoped that the revised version would have more than adequate validity and reliability for the exploratory study envisaged.

Using the benefits of a large sample considerable psychometric work was performed on the instrument during the course of the present study, resulting in what can be seen as a further revised form of the instrument. This work and the psychometric properties of this revised instrument are presented in the Chapter Eight of this report.

Present Research Aims

The aims of the present study will be defined precisely in Chapter 6. However, it would appear necessary, at this stage, to provide a research framework into which we might "anchor" the present study and describe the broad directions which the research will take.

The career anchor is a new, but promising theory, and for that promise to be realized requires a unified and cumulative research approach. Even though such an approach has yet to be implemented, the results of preliminary research seem encouraging enough to propose a broad framework for research, in which the present study may find a role. Firstly, it seems essential to have a practical, valid and reliable measure of the career anchors and/or orientations. DeLong's (1982a) instrument is clearly a starting point, but the work of Van Blaricum and Beukes (1986) and Slabbert (1987) indicate that the factor structure (at least for South African populations) is not a pure one and consequently, that the instrument needs

some refinement. With a sound measuring instrument the second and broader research aim may be more efficiently achieved. The second aim is to test the implications of the theory systematically and empirically. Support from such studies would also lend credence to the career anchor theory.

The aims of the present study would fit into the proposed framework on both levels. The first aim of the present study is to validate the Career Orientation Inventory, using a South African sample. As part of this process, and in itself a second aim, will be an attempt to identify the predominant orientations for fourteen professional groups. These efforts are intended to go some way towards realising the goal of the first part of the proposed framework. The remaining aims of this research are clearly within the ambit of the second part of the framework, and that is to investigate some of the implications of the career anchor theory empirically. Two variables which might theoretically be related to career orientations are job involvement and job satisfaction, and the remaining aims are to find out to what degree those relationships exist within each of fourteen professions.

CHAPTER FOUR

JOB INVOLVEMENT

In 1965, Lodahl and Kejner (1965) made the first concrete attempt to define and operationalise the job involvement concept. Ironically, their influential paper entitled "The Definition and Measurement of Job Involvement" heralded almost two decades of fragmented and directionless research. The measurement of job involvement became the subject of controversy and diverse measures reflected this confusion. By 1983, at least twenty-five instruments measured various aspects of work commitment more or less adequately. In 1983 Morrow was moved to call for a moratorium on their development until clarity could be brought to this area of conceptual chaos.

It is within this disconcerting context that the present study attempts to show that job involvement is primarily a function primarily of personal career orientation and secondly of career orientations interacting with an environmental variable (viz. professional background). It is thus necessary that an attempt be made to investigate the definition of job involvement thoroughly if further confusion is to be avoided.

This chapter initially tries to bring some clarity to the definition of job involvement and to explain past confusion. Secondly, evidence of the determinants of job involvement are examined in order to place the present research attempts in

perspective. Thirdly, the implications of the involvement construct are highlighted, which simultaneously highlights the relevance of the present study. Finally, remaining areas of research are isolated and the contribution of the present study is placed in this context.

The Definition of Job Involvement

The definition of job involvement adopted for the present study was a 'psychological identification with one's work' (Kanungo, 1982). The definition and measurement of job involvement has, however, been the subject of such controversy (Morrow, 1983) that the definition chosen for the present study has to be defended and expanded upon. To that end the confusion surrounding the construct will be introduced in the hope of achieving some clarity.

Confusion as to the definition of job involvement seems to have had five sources, some of which no doubt interacted. The sources of confusion which will be presented in more detail shortly are

- a proliferation of similar or related terms (Morrow, 1983);
- ambiguity in the definition Lodahl and Kejner (1965) used in their seminal article;
- poor operationalisation;
- a belief that the construct is in fact multidimensional;

- a lack of grounding in theory.

Proliferation of Terms

Among Lodahl and Kejner's (1965) predecessors were Allport (1947) and McGregor (1944) who, along with Vroom (1962) were concerned with what they termed "ego-involved performance". Other psychologists have studied "work involvement" (Kanungo, 1982; Dubin, 1956), "intrinsic motivation" (Lawler & Hall, 1970), "internal motivation" (Moch, 1980), various aspects of "organisational commitment" (O'Reilly & Caldwell, 1980; White & Ruh, 1973; Ansari, Baumgartel & Sullivan, 1982), and, along with any number of sociologists, the "Protestant work ethic". These are only a few examples. Morrow (1983) cites twenty-nine related and often redundant concepts. The scope of these concepts and the distinction between them is often unclear.

Morrow (1983) brought some order to this area of chaos. Using a procedure known as facet design, she was able to conceptually isolate areas of common ground and of differences between the various concepts.

Empirical research, using factor analytic techniques, have tended to substantiate these distinctions. Factor analysis reveals the underlying dimensions that a psychometric instrument is measuring, and effectively lifts out areas of common variance as 'distinct factors' showing the degree of

homogeneity of constituent items. Consequently, factor analysis proves ideal in determining whether or not two or more instruments are in fact measuring different underlying dimensions.

Following this reasoning, Lawler and Hall (1970) found job involvement to be factorially independent of both intrinsic motivation and job satisfaction. They were supported by Porat (1979), who showed the correlation between job involvement and job satisfaction to be a tenuous one where job characteristics were held constant. Moch's (1980) factor analysis showed that job involvement is distinctly different from internal motivation. These researchers all defined job involvement as a psychological identification with one's work (the definition accepted for the present study). There is, however, some doubt (to be detailed later) as to whether their measure, the Lodahl and Kejner (1965) scale, measures psychological identification unidimensionally.

Morrow and Goetz (1988) used a scale that drew heavily on the Lodahl and Kejner measure although they defined job involvement in terms of a performance-self esteem contingency. They found job involvement to be factorially distinct from measures of organisational commitment, work ethic endorsement and, most interestingly given the sample employed in the present study, of professionalism.

The following researchers, however, used what appeared to be a purer measure of the involvement as identity construct

and their results were equally encouraging. Kanungo (1982) demonstrated that the conceptually fine distinction between job involvement and work involvement is a valid one. Finally, Blau (1985), in a rigorous study, showed job involvement to be factorially distinct from a number of measures. Firstly he showed job involvement to be distinct from intrinsic motivation replicating Lawler and Hall (1970). Secondly he showed job involvement to be distinct from the Protestant work ethic. Thirdly he distinguished between job involvement and a performance and self-esteem contingency. The performance and self-esteem contingency was a rival definition of job involvement and will also be discussed later. Fourthly, he showed job involvement to be distinct from a measure of active participation in terms of decision making and influence on the job, and lastly of skill utilisation. From this body of research it is clear that job involvement has begun to assume a character of its own, as a unique and independent variable.

The three causes of the confusion surrounding the definition of job involvement to be discussed in the following section are related and stem ultimately from the ambiguity in Lodahl and Kejner's (1965) article.

Lodahl and Kejner's Ambiguous Definition

Lodahl and Kejner (1965) were the first to attempt to define job involvement and devise an instrument to

operationalise the construct. Their article continues to be extremely influential, and their measure remains widely used (e.g. in Mjoli, 1988; Morrow & Wirth, 1989).

Lodahl and Kejner (1965) defined job involvement in the abstract of their article as "the degree to which a person is identified psychologically with his (sic) work, or the importance of work in his total self image" (p. 24). They contradicted the definition in the abstract however by employing a definition based on a performance-self-esteem contingency in the text of that article: "For this work, job involvement was defined as the degree to which a person's work performance affects his (sic) self-esteem" (p. 25).

Work spurred by Lodahl and Kejner's article has assumed on occasion each of these definitions or even accepted both as synonymous.

Poor Operationalisation

This confusion was multiplied by reliance on Lodahl & Kejner's measure with its low epistemic correlation with either definition (Morrow, 1983). Even now there is no clear consensus on what the instrument actually measures. It is not contended that either definition is intrinsically better or more important, but rather, that for research to be cumulative and directed, a clear definition and a common purpose are necessary. Instead, ambiguous definitions and a measure shown

to be factorially multidimensional have led to fragmented and inconclusive research characterised by a great deal of semantic argument.

Assumption of Multidimensionality

As an explanation for inconclusive findings and in order to tie disparate research efforts together it became accepted that job involvement was in fact a multidimensional construct. This represented a convenient catch-all excuse for imprecise measures and inexplicable results.

Of course, if one follows Lodahl and Kejner's (1965) definition and measurement instrument, job involvement is a multidimensional construct (Kanungo, 1982; Blau, 1985). While Lodahl and Kejner had provided the initial creative energy and indicated a potentially fruitful area of research they had perhaps simultaneously led research into a cul de sac of confusion. It would need a backward step and a new start before research into job involvement could proceed with new perspective and a clear direction.

Morrow (1983) criticised the Lodahl and Kejner scale for having a low epistemic correlation (i.e. a weak link between its conceptual definition and its operationalisation). This is no doubt due in part to the vagueness of the authors in their own definition of job involvement. Consequently, she called for a moratorium on research in this area.

The publication of Kanungo's article in 1982, effectively stole the thunder from Morrow's call for a moratorium on the development of new measures of job involvement. Rather, contrary to the call Morrow would shortly make, he had done just that, developed a new measure of job involvement. Instead of trying to consolidate and make do with the profusion of measures and conceptualisations of job involvement, Kanungo decided prima facie to reject the "performance self-esteem contingency" definition of job involvement and set about developing a solid and reliable measure of job involvement defined simply and consistently as a "psychological identification with one's work".

Kanungo's (1982) scale was a development on Lodahl and Kejner's (1965) work in that it retains the four items from the original twenty item Lodahl and Kejner scale that appear to tap the "psychological identification" dimension unambiguously. The remaining six items in Kanungo's scale were generated by ten graduate students under his supervision.

Studies of Kanungo's scale (e.g. Blau, 1985) have shown it to be superior to previous measures. At this stage it is used infrequently, probably because it is a new scale and results of studies using it would not be directly comparable to those of the numerous studies using the Lodahl and Kejner scale. However, it was decided to use this measure in the present study because of its relative "purity" and because of

its congruence with the definition of job involvement that was eventually adopted.

Choosing to define job involvement as a psychological identification with one's work and not as a degree to which one's work performance affects his/her self esteem has a certain arbitrary ring about it which points to a final and ongoing cause for the confusion which Lodahl and Kejner's article heralded. That is that the job involvement construct has no real grounding in theory.

Theoretical Grounding

Intuitively it would seem important to be involved in one's job, both from an individual and organisational perspective. But is this true, and what are the implications? Is a job involved worker a satisfied worker, or a productive worker, or a disciplined worker, or even a healthy worker? Research results are ambiguous and opinions are diverse and couched in vague and indecisive terms. Clearly, if job involvement fits into no definite model of individual behaviour, there can be no foundation into which a definition can be anchored, and furthermore, if particular relationships are not expected, research may well remain exploratory and vacillating.

This problem is still prevalent, and certainly the context of the present research is of necessity exploratory.

However, some evidence of the correlates and to a lesser extent of the precursors and consequences of job involvement have begun to accumulate. While they do not provide a full and integrated model of job involvement, they do provide a point of departure and will be discussed next. Furthermore, while the thrust of the present study is into the nature of career anchors, it is the contention of this author that the description of a person who is anchored to his/her work is one of a job involved person rather than of a person satisfied with his/her work (as described by Schein, 1985). Consequently, the study of individual values and career stage psychology may provide a theoretical foundation for the job involvement construct.

Determinants of Job Involvement

While research has no doubt been hampered by poor measuring instruments, some consistent results and opinions have emerged. Rabinowitz and Hall (1977) gave a comprehensive review of the literature before 1977 including a summary of correlates of job involvement. Correlates they reported have been used in support of arguments that job involvement is determined variously by:

- personal characteristics, suggesting that job involvement is an individual difference variable;
- situational characteristics;

- both personal and situational characteristics simultaneously, suggesting that job involvement is an interaction effect;
- personal and situational characteristics acting independently.

These possibilities will each be considered in the following section.

Job Involvement as an Individual Difference Variable

The term an "individual difference" variable is used frequently in the job involvement literature (e.g. Morrow, 1983; Rabinowitz, Hall & Goodale, 1977). It refers to variables upon which individuals may differ even if environmental/contextual factors are held constant. Age is an example of such a variable. Within defined cohorts, however, variables such as locus of control, the Protestant work ethic and of course career anchors may be assumed to be largely independent of contextual factors and hence to represent individual differences.

Early researchers (e.g. Dubin, 1956 and Lodahl, 1964) regarded job involvement as an individual difference variable. They saw job involvement as a product of early socialisation and an operationalisation of traditional work values such as the "Protestant Work Ethic".

Support for this position was sought by investigating the correlations between job involvement and quantifiable

variables that might have represented individual differences. Of these, the only variables showing fairly consistent correlations with job involvement were age, education, internal locus of control, higher order need strength and finally measures of the Protestant Work Ethic - all these relationships were in a positive direction (Rabinowitz & Hall, 1977). Moch (1980) in a finding similar to the above concerning higher order need strength, found growth orientated workers to be more job involved than workers who were less growth orientated.

Morrow (1983) and Mannheim and Dubin (1986) both cite evidence supporting the hypothesis that job involvement is a function of the person, and that it is determined independently of situational variables. Morrow (1983) supported Rabinowitz and Hall (1977), finding consistent positive relationships between job involvement, and age, internal locus of control and higher order need strength. Mannheim and Dubin (1986) found that job involvement was correlated with education and that men were significantly more involved than women. This gender difference is contrary to Rabinowitz and Hall's (1977) conclusion. They did report one finding that men had significantly greater job involvement than women, but claim that where length of service and job level were held constant, the difference was reduced to non-significance.

The strongest support for the idea of job involvement being an individual difference variable came from research into the stability of job involvement scores over time. The rationale being that if it is a personality factor it should remain fairly constant. Test-retest reliability coefficients indicate stability over time, and coefficients of above .70 over a twenty month period were reported by Rabinowitz and Hall (1977). This certainly does indicate a relative stability. However, they gave little evidence of any strong situational changes that might have threatened that stability even if job involvement were entirely situationally determined. Furthermore, a coefficient of .70 does indicate some change over time.

Lorence and Mortimer (1985) studied changes in job involvement over time in three panel groups of various ages. Their findings tend to support the career stage model sketched in Chapter Two, particularly the thesis of a stable maintenance stage in mid-career. They found that job involvement was relatively unstable in the youngest group (aged 16 - 29), then became increasingly stable through to the mid-forties. Thereafter, job involvement and its stability started to decline considerably. This pattern roughly corresponds to the degree of novelty in the panelists environment, so again it is unclear whether this supports the situational or personality perspective.

In concluding this section, there is some evidence that job involvement is an individual difference variable. This evidence must provide some prima facie support for the contention that job involvement may be related to career anchors which according to Schein's (1985) description could be classified as individual difference variables. However, while personality factors may have a moderating effect, strong evidence will be presented shortly showing that job involvement may also be a function of the situation.

Job Involvement as a Function of the Situation

Management theorists, particularly those who fall broadly into an Humanist school have tended to propound the view that involvement and participation in work will occur spontaneously in response to favourable work situations (Argyris, 1964; McGregor, 1960). For example, McGregor (1960) suggested that self-control is natural and responsibility is sought by employees (part of his theory Y assumptions). However, he feels that these tendencies have been subverted by the dominant, self-fulfilling and reinforcing Theory X paradigm which sees workers as inherently lazy, requiring control and direction. Hackman (1976) proposed that involvement results from jobs that have the following core dimensions, skill variety, task identity, task significance, autonomy and feedback. These dimensions may be considered an

operationalisation of aspects of McGregor's Theory Y assumptions.

Hall (1971, 1976), thinking along similar lines, described a clearer model of work characteristics leading to commitment and involvement. Hall included a specific situational characteristic not built into Hackman's model, but one which may be an essential component, and that is the presence of challenging goals. This model seems to be a development on earlier work with Lawler (Hall & Lawler, 1970). Hall's (1971) general model of the development of involvement may be expressed as follows: challenging goal → effort goal attainment → psychological success → increased self esteem → increased commitment and involvement.

Thus the feeling of success and self esteem reinforces an individual's commitment to and involvement in the job which led to those outcomes. This model was supported by the work of Hall, Goodale, Rabinowitz and Morgan (1978), which showed involvement to be significantly related to job stimulation (analogous to a challenging job), to effort, to psychological success, and to job satisfaction.

The correlation between job involvement and higher order need strength has already been mentioned, and thus it is not surprising that challenge, effort, and goal attainment are also integral to Schein's (1977a) conceptualisation of individual growth. Schein saw growth as analogous to learning

a new response. So where a novel situation arises, and a challenging situation is often a novel one, various new responses are tried until a successful response is found. The individual thereby broadens his/her response repertoire, increases his/her flexibility, and, according to Schein, grows psychologically.

Research has supported the contention that situational variables might independently contribute to involvement in the job. Rabinowitz and Hall (1977), in their summary of pre-1977 research showed involvement to be related to leader behaviour (leaders who displayed confidence and trust had more involved workers), participation in decision making, the degree of social contact on the job and job satisfaction. They also found conflicting evidence which tended to tie involvement positively to both job rank and performance. Of course, the causal link between these last variables remains ambiguous - does performance cause involvement, or vice versa, or are they simultaneously cause and effect as implied by Hall's (1971) model?.

A further finding of research prior to Rabinowitz and Hall's (1977) review was that of Lawler and Hall (1970), who found involvement to be strongly related to pressure for quality work - to do what was technically a good job. This is of particular interest as these were professional people, as are the subjects of the present study, and pressure for quality may be considered a professional concern.

Literature subsequent to the 1977 review has provided further support for a situation based perspective on job involvement. Hall, Goodale, Rabinowitz and Morgan (1978) found that top down (imposed) change, regardless of whether it objectively improved or worsened work conditions, resulted in decreased job involvement (and in fact decreased job satisfaction). Porat (1979) showed that the relationship between job involvement and job satisfaction could be reduced to insignificance by controlling for organisational factors. These factors were based on Hertzberg's (1986) motivator variables, for example, expression of abilities, responsibility and advancement.

O'Reilly and Caldwell (1980) showed that greater freedom of choice in career decisions led to greater involvement and satisfaction. They explained these findings with recourse to expectancy theories and the cognitive dissonance effect. Similarly, Lorence and Mortimer (1985) found autonomy to be significantly related to job involvement in all age groups although income and occupational status appeared to have no effect. In fact they echoed Rabinowitz and Hall's (1977) equivocal findings.

Knoop (1986) found job involvement to be related to job factors rather than personal factors. In one of the few studies using multiple predictors of job involvement he found that (in order of importance) job satisfaction, job motivation, participation in decision making and finally,

satisfaction with supervision, together accounted for 28% of the variance in job involvement. This is also one of the highest prediction proportions achieved, evidence that job involvement is still largely unexplained.

In a similar study Mannheim and Dubin (1986) predicted 21% of the variance in job involvement using, among others, situational variables, notably task autonomy and job satisfaction. They termed job satisfaction an outcome variable, and it may be interpreted as an index of environmental characteristics. Job satisfaction proved to be the largest single predictor. However, the personal variables of gender and education also entered the model and contributed strongly to the prediction level achieved. Although their findings were somewhat contrary to Knoop's (1986), the situational variables Mannheim and Dubin (1986) studied were very limited and crude by comparison. For example, one variable was whether the production system was unit or batch processing.

It appears then that job involvement is, at least in part, determined by situational variables irrespective of personal characteristics.

Job Involvement as a Product of the Person-Environment Interaction

It seems from the above discussion that job involvement is determined to some extent by both personal and situational characteristics acting independently. To further complicate the issue, there is also evidence to the effect that job involvement may be determined by the interaction between personal and situational variables.

Lawler and Hall (1970) found that job involvement was related to self-rated job design characteristics, and not to objective measures of the same characteristics (i.e. challenging job and customer contact). Because of the self-rating Lawler and Hall suggested that the finding could equally support an individual difference or an individual by job characteristic interaction perspective on the determinants of job involvement. Hackman and Lawler (1971) investigated the moderating effect of higher order need strength on the outcome of job redesign interventions. Brief and Aldag (1975), replicated the Hackman and Lawler (1971) study. Both found significant results supporting an interaction perspective, that is that higher order need strength (an individual difference) moderated the effect of job redesign (the manipulation of situational variables) on individuals' job involvement.

One pre-1977 study had contradictory findings. White and Ruh's (1973) study investigated the moderating effect of values, measured by the Rokeach Value Survey, on the strong relationship (r (2749) = .53, $p<.01$) between participation in decision making and job involvement and found none.

Research subsequent to Rabinowitz and Hall's (1977) review has, however, tended to support the interactionist perspective. Misra and Kalro (1981) found in a study set in India, that job involvement resulted from the satisfaction of salient needs only. Salience of the needs they measured was determined by whether a manager in their sample was extrinsically or intrinsically motivated. Similarly, Kanungo (1982) demonstrated that job involvement stemmed from the perceived need satisfying potential of the job - hence the relationship with satisfaction. The association was stronger where the perception was of salient need satisfaction rather than non-salient need satisfaction. Blau (1987) found job involvement to be consequent upon the fit between a personal variable, namely endorsement of the Protestant work ethic, and a situational variable, namely the scope the job offered. High-scope jobs were defined as providing autonomy, skill variety, task identity, and feedback.

All the hypothesised determinants of job involvement, individual differences, situational characteristics and the interaction between both variables, seem to have some

foundation in fact. Situational variables seemed to be the strongest predictors and individual variables played a largely moderating role. Although these findings are fairly clear cut, it should be borne in mind that job involvement remains largely unexplained, in that the variance explained is seldom above 20% using multiple predictors. Rabinowitz and Hall (1977) cited two studies which apparently report multivariate R^2's of .27 and .45 respectively. However, neither of these studies was published.

The determinants of job involvement have been examined. The findings boded well for the present study which would in due course investigate the effects of personal variables (career orientations), situational variables (professional category and job satisfaction) and their interactive effects on job involvement.

Although job involvement, as with job satisfaction, could be considered a worthwhile end in itself, the meaning would be lost without examining the reverse side of the coin - what variables does job involvement itself determine, and what implications does job involvement hold for personal and organisational outcomes.

Implications of the Job Involvement Construct

Rabinowitz and Hall (1977) conclude that job involvement is a "feedback variable" - both a cause and effect of job

behaviour. Research into job involvement as a cause has focused primarily on job performance, turnover and absenteeism as dependent variables, but the results have been less encouraging than research into determinants of job involvement. These implications and effects of job involvement will be considered briefly as they underscore the practical relevance of the present study.

Job Involvement and Performance

Although Rabinowitz and Hall (1977), in concluding their review, suggested that job involvement and performance are related, they supplied little supporting evidence. Only two of the studies they reviewed unequivocally supported the hypothesised relationship. Vroom (1962) found that high ego-involvement (a concept similar to job involvement) was associated with high performance, and Hall and Lawler (1970) found a rating of global technical performance, but not more specific measures of performance, to be related to job involvement.

A more recent study did, however, show a clear relationship between involvement and performance and the author provides some insight into why previous research has been disappointing. Rabinowitz (1985) looked at the academic "job" involvement (a parallel term to job involvement) of a group of upper-level business students and found it to be

related to their academic performance. He suggested that the relationship was clear because, firstly, performance goals were clearly and distinctly spelled out. Secondly, the goals were within the control and ability of the subject and, finally, they were relatively short-term in nature. Obviously, these criteria are seldom met in organisations and Rabinowitz (1985) saw this as the reason why previous research had shown little relationship between involvement and performance. He concluded that the relationship may be situationally dependent.

Job Involvement, Turnover and Absenteeism

Turnover and absenteeism figures provide intriguing variables for study being at once a possible index of personal distress suffered by employees and of a dysfunctional expense incurred by organisations.

As one might expect intuitively, research has tended to associate high job involvement with low staff turnover and low absenteeism. For example, Farris (1971), in a longitudinal study found job involvement to be negatively related to turnover for a pharmaceutical company's employees, but not for engineers in an electronics firm. Siegel and Ruh (1973) found job involvement to be negatively correlated with turnover but not with absenteeism. Rabinowitz and Hall (1977) reported negative correlations between job involvement and absenteeism

for work units of the Tennessee Valley Authority. Rabinowitz (1985) found academic job involvement that is involvement in the job of being a student - a parallel term to job involvement, to be negatively correlated with number of absences. Blau and Boal (1987) described a provocative conceptual model linking job involvement and organisational commitment to predict turnover and absenteeism. Brooke and Price (1989) in a single discordant finding reported job involvement, measured by Kannungo's (1982) scale, to be unrelated to self-reported absenteeism.

Job involvement seems to predict turnover more consistently than absenteeism and the frequency of absences rather than the duration. However, there are discrepancies in the degree of prediction various studies achieve, ranging from as much as 16 percent of the variance in turnover to as little as two percent (Blau & Boal, 1987). As Cheloha and Farr (1980) suggested, this discrepancy may result from the various ways in which absenteeism and turnover are defined and measured. They suggested, for example, that absenteeism may be divided into a dichotomy, excused absence (for example absence on medical grounds), and inexcused absence. Similarly, Blau and Boal (1987) classified absence into four categories - medical, career-enhancing, normative and calculative. These distinctions are extremely important as the validity of absence as a measure of individual distress

and the organisational implications thereof is dependent upon the category of absence recorded.

Similarly, it is well worth distinguishing between two types of turnover. Following Dalton, Todor and Krackhardt (1982), turnover may be functional or dysfunctional to the organisation. Dysfunctional turnover occurs when a valued employee leaves the organisation voluntarily. Functional turnover occurs when, due possibly to poor performance or an abrasive personality, the organisation is actually glad to see an employee leave voluntarily. Unfortunately these distinctions are seldom made.

Present Research Aims

There remains a great deal of work to be done in this promising field of study. Although their review was published a decade before this project commenced, the thrust of Rabinowitz and Hall's (1977) suggested directions for future research remains pertinent. These included "more research on personality and cognitive characteristics ... more studies of career patterns and work histories ... more theory based research touching perhaps on identity variables, other involvements and role relationships" (p. 286). They also suggested greater use of multivariate studies.

The manifold aims of the present study are closely aligned with the directions Rabinowitz and Hall sketched.

This study intends to combine role relationship/career patterns (operationalised by association with professional bodies) with personality and cognitive characteristics (career orientations) to predict job involvement. This will be a multivariate study and will be interpreted within the context of both career stage and Career Anchor Theory.

Subsidiary and preliminary aims include assessing the psychometric properties of Kanungo's (1982) instrument using samples of South African professional groups, and assessing the relative levels of job involvement experienced by these groups.

CHAPTER 5

JOB SATISFACTION

Job satisfaction is incorporated into the present study to test its dependence on career orientations. This follows Schein's (1985) suggestion which was supported by the work of Eastwood (1980) and Laber (1982). This chapter attempts to draw out of the extraordinarily voluminous literature on the job satisfaction construct (Locke, 1983), those topics which will enhance understanding of the hypothetical relationship between satisfaction and career orientations and of job satisfaction itself, and evidence that job satisfaction is a worthwhile variable for study.

Towards these ends the specific objectives of this chapter are:

- to define job satisfaction;
- to explore the determinants of job satisfaction with particular reference to work-related values, as work-related values are the core component of career orientations. Other determinants (e.g. pay and work hours) will be introduced briefly as the different professions may vary on these dimensions and the analyses to be performed may be distorted by them;

- to provide a conceptual distinction between the two outcome variables under study, viz. job satisfaction and job involvement;
- to consider some of the implications of job satisfaction (or lack thereof) in personal and organisational terms and thereby to highlight the relevance of the study of satisfaction;
- and finally to outline present research aims with respect to job satisfaction

Job Satisfaction Defined

The definition of job satisfaction that has been adopted for this study is "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1983, p. 1300).

Two aspects of this definition may need amplification. The first aspect is that satisfaction as defined is an emotion. This aspect ties the construct to the evolutionary roots of a person's conscious functioning and, of immediate relevance, to his/her value system. According to Locke (1969) and Rand (1964), consciousness has three basic biological functions, or potentialities for action:

- cognition, the perception and identification of objects and actions;

- evaluation, an estimate of the beneficial or harmful relationship of perceived existents to oneself, and
- the regulation of action.

According to Locke (1969), cognition, or the apprehension of what exists, is not enough to reveal the <u>significance</u> of what is perceived, nor what action to take. To survive an organism must take actions to fulfil its needs. It must therefore, <u>evaluate</u> the objects and conditions which confront it, using its own life as the standard (i.e. whether they are life-enhancing or life-negating). To facilitate this evaluation an individual acquires a code of values. The process of evaluation then becomes an estimation (consciously or subconsciously) of the relationship between some object, action, or condition and one or more of one's values. The outcome of such an evaluation, according to Locke (1969) is an emotion.

Emotional capacity is thus an automatic barometer of what is for or against one within the context of individual knowledge and values.

> "The relationship of value-judgements to emotions is that of <u>cause</u> to <u>effect</u>. An emotion is a value-response. It is the automatic psychological result (involving both mental and somatic features) of a super-rapid subconscious appraisal.

> An emotion is the psychosomatic form in which man experiences his estimate of the beneficial or harmful relationship of some aspect of reality to himself" (Branden, quoted in Locke, 1969, p. 315).

The most basic of these emotions are pleasure and displeasure, or joy and suffering. In achieving his/her values, a person experiences his/her efficacy as a living being (Locke, 1969).

The third biological function, the regulation of action, is consequent upon the emotional evaluation of aspects of reality as beneficial or harmful. For example the emotion of fear may lead to the action of flight.

An important point has been made, that job satisfaction, as an emotion, may be theoretically dependent upon values. The value construct, in terms of career orientations, is the cardinal variable in this study and the relationship will be explored more deeply later in this chapter.

The second conspicuous aspect of the definition is that it offers no specific prescription of just what facets of the job or job experiences may be appraised as satisfying or dissatisfying. The truth seems to be, and is implicit in the above discussion, that almost any job-related event, condition or agent (i.e. co-workers, supervisors, etc.) may be evaluated positively or negatively in terms of their impact on the achievement of one's values.

In fact, evidence will be presented to show that job satisfaction may be related to a wide variety of conditions promoting physical well-being, sense of relatedness, and psychological growth (e.g. Alderfer, 1972; Hackman, 1976; Hackman & Lawler, 1971; Hackman & Oldham, 1976; Hertzberg, 1966; Maslow, 1954; Roberts & Glick, 1981; Walsh, Taber & Beehr, 1980; and Voydanoff, 1980). Even the anticipated realisation of one's values may result in job satisfaction (Kopelman, 1979; Locke, Cartledge & Knerr, 1970; Mitchell, 1974, 1982; Mitchell & Allbright, 1972; and Vroom, 1974). In a fascinating study of monozygotic twins reared apart, Arvey, Bouchard, Segal and Abraham (1989) have gone as far as to demonstrate a genetic component of job satisfaction.

The importance of this point, that job satisfaction is a function of an extremely broad array of job facets, is that it may complicate the present study of satisfaction among professions that differ widely in their job contents and contexts. It is, therefore, necessary to consider briefly the different sources of job satisfaction and how they might vary among the different professions.

Determinants of Job Satisfaction

Some determinants of job satisfaction will be introduced briefly. Sources of satisfaction and dissatisfaction are not considered separately. For present purposes they are

considered opposite ends of the same dimension. This view may be a contentious one given the influence of Herzberg's Motivator-Hygiene theory (Herzberg, 1966; Herzberg, Mansner & Snyderman, 1959). However, more recent investigation of Herzberg's theory has produced ambiguous results at best (Dachler & Hulin, 1969; Khaleque & Rahman, 1987; Locke, 1983). Locke (1983) goes so far as to conclude that "Herzberg's insistence on the idea of two unipolar continua ... seems indefensible, both logically and empirically" (p. 1318). Consequently the determinants of job satisfaction to be presented should be regarded as potential causes of both satisfaction and dissatisfaction. For example inequitable pay may cause dissatisfaction while fair or high pay may add to job satisfaction (Locke, 1983).

Work-related values may have a moderating influence on the salience of the determining variables that will be outlined. Because of their pre-eminence in this regard and of their central importance to the present study (as the core components of the career orientation construct) work-related values will be subject to a separate and more extensive discussion later.

Some of the factors affecting job satisfaction will be introduced briefly. Locke (1983) provided a detailed review of the subject. Factors affecting job satisfaction may be broadly described as extrinsic or intrinsic to the work itself.

Extrinsic Job Satisfaction

Two extrinsic factors will be considered, namely pay and working conditions. These two factors will be focussed on because both have been the subject of intense research, and because the fourteen professions under study may be expected to vary considerably on these dimensions.

Remuneration

A great deal of research has consistently found remuneration to be positively related to job satisfaction (Bokemeier & Lacy, 1986; Hackman & Lawler, 1971; Lottinville & Scherman, 1988; O'Reilly & Caldwell, 1980; Savery, 1989a; Voydanoff, 1980; and Wanous & Lawler, 1972).

Locke (1983) suggests that equity theory provides a fairly accurate prediction of satisfaction (or dissatisfaction) in situations of underpayment or equitable payment. Equity occurs where rewards are perceived to be commensurate with an individual's inputs and outputs in relation to other people holding similar jobs. Equity theory does fall short, however, in situations of overpayment. The theory would predict that overpayment would lead to dissatisfaction whereas the evidence suggests that overpayment does not result in dissatisfaction, nor in greater

satisfaction than equitable pay (Locke, 1983). Greenberg's (1989) study provided evidence that may explain the finding that overpayment may not result in dissatisfaction. He suggested that cognitive distortion of the value of various outputs and inputs may effectively redress perceived inequities. Underpayment inequity may theoretically be reduced by working less (a possibly risky option) or by cognitively reevaluating other job facets such as work hours or autonomy as more important and more satisfying. Similarly, overpayment inequity may be redressed by considering one's loyalty to the company for example to be a valuable contribution.

Rice, McFarlin and Bennett (1989) provided strong empirical support for a similar theory of job satisfaction - the discrepancy theory. According to the theory, satisfaction with particular job facets is dependent upon the discrepancy between the current experience of a job facet and the desired levels of that facet. As with the equity theory the discrepancy theory is applicable to various facets of job satisfactions including pay satisfaction.

Working Conditions

A variety of work conditions are associated with job satisfaction. These include temperature, ventilation, lighting, noise, cleanliness and work hours (Locke, 1983).

Most of these conditions would be taken for granted in the professions under study. However, there is evidence that, of the professions studied here, general practitioners and nurses in particular may be dissatisfied with long working hours ("General Practitioners", 1989; "Overworked, underpaid", 1990; Scorpio, 1989; "Shortage of", 1990), and that medical doctors are distressed by constant interruptions at home and at work ("General Practitioners", 1989).

Intrinsic Job Satisfaction

An adaption of Hackman's (1976) model of work motivation (Figure 5) may provide an organising principle for a discussion of the intrinsic sources of job satisfaction. The model explains how each of five intrinsic facets affect a person's psychological appraisal of a job and thus contribute to job satisfaction. According to the model jobs which are experienced as satisfying would be meaningful to the job occupant in terms of the variety, identity and significance of the job performed. These dimensions will be elaborated on shortly. Furthermore the job occupant should have sufficient autonomy to consider him/herself responsible for work outcomes and sufficient feedback to be aware of those outcomes. The model highlights the overriding impact of personal values in moderating the effect of each core job dimension on job satisfaction. Each of the five core job dimensions will be

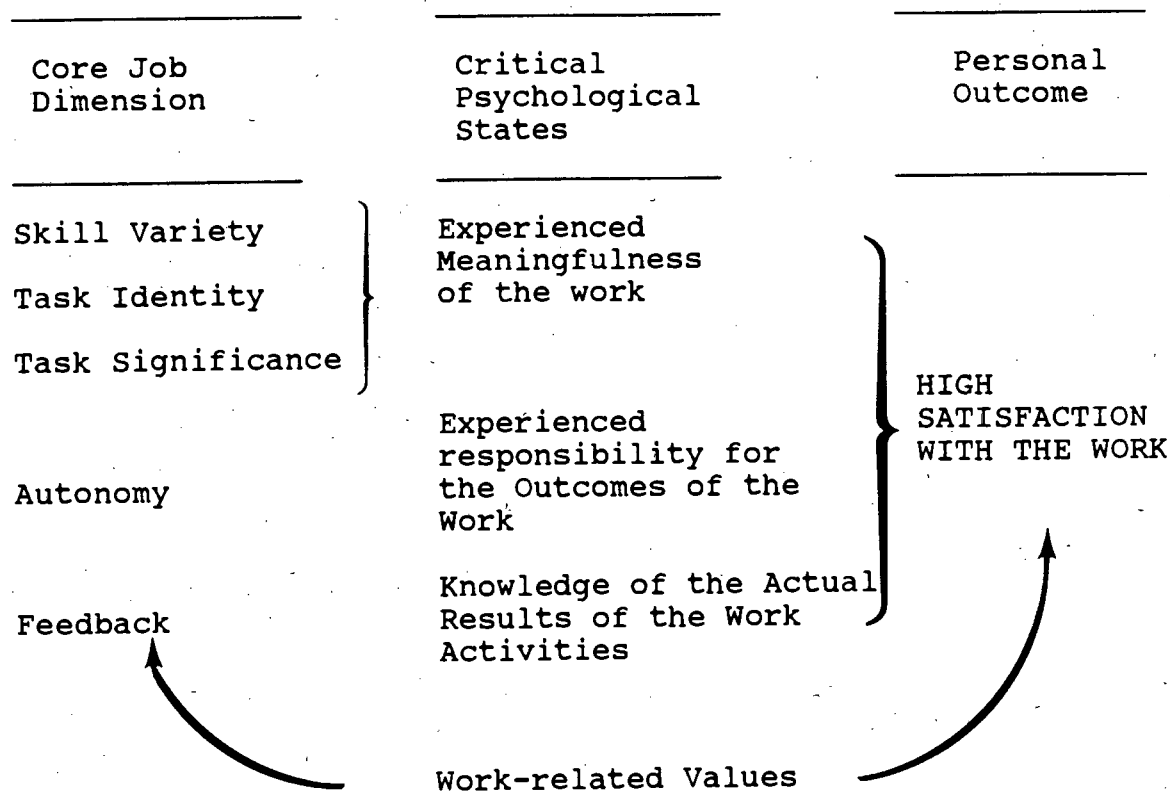


Figure 5 A job characteristics model of job satisfaction. (Adapted from Hackman's (1976) work motivation model.)

considered in turn, and thereafter the relationship of work related values to job satisfaction will be discussed in some detail.

Skill variety

This intrinsic job facet describes the degree to which a job requires the use of a number of different skills and talents (Hackman, 1976). Skill variety appears to be strongly related to overall job satisfaction (Humphrys & O'Brien, 1986; Seybolt, 1980; Walsh, Taber & Beehr, 1980). For example, structural changes in the pharmacy profession have resulted in low skill utilisation for pharmacists (Humphrys & O'Brien, 1986). The effect of technological advancements in the manufacture of drugs has reduced the opportunity for pharmacists to use their skills and influence the way drugs are compounded and prescribed and consequently reduced the job satisfaction they experienced.

Job challenge is closely correlated with skill variety (Walsh, Taber & Beehr, 1980), and has also been identified as an important source of job satisfaction (Savery, 1989a). Hall and Lawler (1970) suggest that job challenge may be a powerful tool in integrating professionals into organisations. This is an important consideration given the present research sample and the concerns expressed in Chapter One about integrating professions into organisations.

Task identity

This dimension reflects the degree to which the job requires completion of an entire and identifiable piece of work with a visible outcome (Hackman, 1976). This is in contrast to a traditional production-line type of job. Task identity is related to overall satisfaction (Seybolt, 1980; Walsh, Taber & Beehr, 1980) and to career satisfaction (Seybolt, 1980).

Task significance

The final dimension in the model that contributes to the experienced meaningfulness of a job is task significance. It is the degree to which the job impacts on other people or their jobs, inside or outside the organisation (Hackman, 1976; Seybolt, 1980). In Seybolt's (1980) study this dimension was a lesser contributor to job satisfaction than the variety and identity dimensions.

Autonomy

Autonomy may be among the most important job facets to the professionals in the present study. In fact, Boshoff (1981) and Morrow and Goetz (1988) suggested that autonomy of

judgement is a criterion of professional behaviour. Autonomy has been consistently identified as a major component of job satisfaction (Khaleque & Rahman, 1987; Lawler & Hall, 1970; Mannheim & Dubin, 1986; Seybolt, 1980; Walsh, Taber & Beehr, 1980; Wanous, 1974). The autonomy-satisfaction relationship may however be moderated by higher order need strength (Seybolt, 1980; Wanous, 1974).

In terms of particular professional groups, samples of nurses (Greenberger, Strasser, Cummings & Dunham, 1989), accountants (Adler, Arahya & Amernic, 1981) and medical practitioners ("General Practitioners", 1989), have confirmed the importance of autonomy to professional people. One of the career orientations measured in the present study focuses exclusively on automony and this study will thus add to the information regarding the importance of autonomy to professionals and how it affects their job satisfaction.

Feedback

The final job dimension depicted in Figure 5 that has been identified as a contributor to job satisfaction is that of feedback (Seybolt, 1980; Walsh, Taber & Beehr, 1980; Wanous, 1974). In their study, Khaleque and Rahman (1987) found feedback to be an even more important component of job satisfaction than dimensions such as autonomy and wages.

The final factor in the model (Figure 5) is work-related values, which moderates the degree to which a particular job facet may be perceived to be important and hence a potential source of satisfaction or dissatisfaction. This pivotal role played by values in determining job satisfaction will be discussed in detail in the following section. As has been mentioned, it is of particular importance given the objectives of the present study and the focus on career orientations which have work-related values as a core component.

Job Satisfaction and Values

Early empirical investigations of the relationship between satisfaction and personal values initially focussed on the measurement of satisfaction. Attempts were made to build a specific value component into measures of job satisfaction. If these value-weighted measures could be shown to be superior to conventional measures it was reasoned that the impact of values would be demonstrated. These early efforts proved frustrating. Both Ewen (1967) and Mikes and Hulin (1968) constructed measures of satisfaction, weighted by the rated importance of each component, and hypothesised that these measures would be superior to unweighted measures if values did have a moderating effect on satisfaction. They found instead that weighted and unweighted measures correlated very highly, and Mikes and Hulin (1968) found them to be equal

predictors of turnover. Both Ewen and Miles and Hulin suggested that weighing scales by importance therefore seemed irrelevant and consequently doubted the importance of personal values in determining job satisfaction.

Evans (1969), in a review of satisfaction measures, also assumed that one should ideally include some specific measure of job facet importance in an instrument designed to measure job satisfaction, but provided no theoretical grounding for this assumption. He went as far to suggest a possible reason why previous attempts had been unsuccessful by suggesting that respondents tended to report every facet as important and thus restrict the range of variation in the measure. However, this seems to be an untenable argument. Either Evans has suggested that a response set is to blame, or that all components <u>are</u> considered equally important by respondents. If it is the former, he would have to explain why questions relating to the importance of a job facet should be any more prone to problems with response sets than the questions on satisfaction with that facet. If he is suggesting the latter, that all facets are seen as equally important by respondents, then measuring their importance would be irrelevant as Ewen (1967) and Mikes and Hulin (1968) concluded.

In fact, Ewen (1967) and Mikes and Hulin (1968) were probably right - measurement of importance is unnecessary - but they lacked the theoretical perspective to explain their findings and to maintain their intuitive belief that

importance is important! Several authors reached the same conclusion but argued, more cogently than Evans (1969), that weighing facet satisfaction by facet importance is unnecessary as the satisfaction ratings already reflect importance (Locke, 1969, 1983; Mobley & Locke, 1970; Wanous & Lawler, 1972). Locke (1969, 1983), perhaps the foremost job satisfaction theorist, offered the clearest explanation, bearing in mind that he had identified satisfaction as an emotional response.

Locke (1983) argues that every emotional response reflects a dual value judgement: the discrepancy between what the individual wants and what he perceives himself as getting, and the importance of what is wanted to the individual. Thus an accurate estimate of affect intensity (e.g. degree of job satisfaction) reflects both percept (or cognition) - value discrepancy and value importance. Weighting the individual job satisfaction estimates by value importance would thus, in Locke's (1983) view, be redundant since importance is already reflected in these ratings. So, for example, two individuals underpaid by the same amount may report different levels of satisfaction with their pay. This difference would reflect the difference between the relative importance of pay to these individuals.

More indirect and more sophisticated empirical approaches have nevertheless demonstrated that satisfaction and values are inextricably bound. For example, Blood (1969), showed the Protestant work ethic (which represents a work related value)

to be significantly and independently related to job satisfaction, although the correlations obtained were small (up to r = .22 with N = 114). Mobley and Locke's (1970) study was more sophisticated. They argued that when a job aspect (value) was important to an individual, value attainment and value frustration would produce more satisfaction and dissatisfaction respectively than when it was less important. Four studies they reported supported this hypothesis, and a fifth study supported a related hypothesis, that the overall variability in satisfaction with a job aspect would be proportional to the importance of that aspect (Mobley & Locke, 1970).

Independent of research attempting to show a direct relationship between values and job satisfaction but beginning almost concurrently with the early research already reviewed in this chapter is a tradition of research which also assumes that values are an important determinant of job satisfaction. This is research initiated largely by the valence and expectancy theories proposed by Vroom (1964), and is based on the assumption that satisfaction is not only dependent upon the realisation of one's values, but also on the <u>expectation</u> that one's values will be realised.

The expectancy models of job satisfaction are worth considering as they provide a precise theoretical and mathematical model of the relationship between work-related values and job satisfaction. In this they might help explain

why professionals working in an environment that supports their value orientations may experience their job as satisfying.

Expectancy Theories of Job Satisfaction

Vroom's (1964) theories fall under a category of cognitive models known as process models (in contrast to the relatively static content models) which attempt to define causal relationships between variables that may lead to behavioural or affective outcomes. So process models of job satisfaction tend not to see any particular event, task or element of the work environment as intrinsically or inevitably satisfying. Instead, affective reactions are considered to be dependent upon the interaction between the person and his/her environment, and the process models describe the mental processes that might determine these reactions.

Vroom's (1964) models are comprised of three elements, valence, expectancy and instrumentality.

- Valence: Valence (a term derived from the word "value") refers to an affective orientation towards particular outcomes. Valence may be positive, indicating a preference for particular outcomes, or negative, indicating that it would be preferable not to attain particular outcomes. A zero valence would indicate indifference to those outcomes.

- Expectancy: The expectancy construct describes a momentary belief concerning the likelihood that a particular act will be followed by a particular outcome (Vroom, 1964). Expectancy may be expressed as a probability, ranging from zero (certainty that the act will not be followed by the outcome), to one (certainty that the act will be followed by an outcome).
- Instrumentality: What Vroom meant by instrumentality is less precise but it seems to describe an attitude that may be positive or negative regarding sequentially related outcomes (Vroom, 1964). For example, a first-level outcome of performance may lead to a more highly valued second-level outcome of promotion (Luthans, 1981).

Vroom's primary aim was to present a model of motivated behaviour. He presented this model as a mathematical relationship between variables such that the force on a person to perform an act is a function of the "sum of the products of the valences of all outcomes and the strength of his expectancies that the act will be followed by the attainment of these outcomes" (Vroom, 1964, p. 18). Expressed algebraically as (somewhat simplified):

$$F_i = f_i [\sum (E_{ij} V_j)]$$

Where F_i = the force to perform act i

E_{ij} = the strength of the expectancy that act i will be followed by outcome j

V_j = the valence of outcome j

(For simplicity's sake, the model is represented as $\sum EV$ in many texts, and the various models will be presented in similarly simplified format from here on.)

Besides his work on motivation, Vroom (1964) also generalised his models to predict job satisfaction. He hypothesised that "the valence of a job to a person performing it is a monotonically increasing function of the algebraic sum of the products of the valences of all other outcomes and his conceptions of the instrumentality of the job for the attainment of these outcomes" (Vroom, 1964, p. 279). The job satisfaction model may be expressed as $\sum IV$, and is a development of the valence model presented earlier.

Empirical research has generally supported this model although criticism has focused on the precise algebraic relationship between the variables (e.g. Mitchell, 1974, 1982; Kopelman, 1979) and critics have suggested that the model is too complex to be a true representation of cognitive functioning (Mitchell, 1982). Research has been hampered by measurement problems (Mitchell, 1974, 1982) and by confusion amongst researchers between the constructs instrumentality and expectancy. Consequently, instrumentality has tended to be

operationalised as a probability (for example in Kopelman, 1979), in which case it cannot have negative values. The implications of this will be discussed when Kopelman's study is addressed in the brief review that follows.

Empirical Studies of the Valence Model of Satisfaction

Mitchell and Allbright (1972) constructed a study that measured the constituents of Vroom's $\sum$ VI formula. Their final sample consisted of 48 naval aviation officers and calculations were based on twelve outcome variables. They found that $\sum$ VI correlated $\underline{r}$ = .48 ($p<.01$) with the naval officers' self-evaluated overall satisfaction, and further that the correlation was greater for intrinsic satisfaction outcomes (which had greater valence) than for extrinsic outcomes, $\underline{r}$ = .60 ($p<.01$) as opposed to $\underline{r}$ = .26 ($p<.05$).

Two further findings are of particular relevance. Firstly, they found that the valence models correlated significantly with intentions to remain in the Navy providing evidence of criterion validity. However, it appears from their discussion that the correlation between a self-evaluated satisfaction with one's position and intention to remain was stronger ($\underline{r}(47)$ = .65, $p<.01$). Secondly, they found that the addition of an expectancy component to the model improved its predictive power although this clearly deviates from the Vroomian model.

Wanous and Lawler (1972) contrasted various methods of operationalising job satisfaction, one of which they suggest corresponds to the $\sum$VI formulation. They represented the model as (Wanous & Lawler, 1972, p. 96):

$$\text{Job satisfaction} = \sum_{\text{Facets}} (\text{Importance X Is Now})$$

This is not identical to the VI model as present satisfaction with a job facet is not quite analogous to instrumentality and the seven-point scales used in their measuring instruments made no provision for negative values. Nevertheless, the model accounted for about 23% of overall satisfaction [r (207) = .48, $p<.001$] which was approximately average for the nine models tested.

Both the Mitchell and Allbright (1972) and Wanous and Lawler (1972) studies correlated the score derived from a model with a global satisfaction rating. While this gives some initial evidence of criterion validity, comparison with further criterion variables (e.g. turnover and absenteeism) seem called for if the relative value of Vroom's model is to be fairly assessed. Both the studies cited show that the model may predict satisfaction to some degree, but not that they account for meaningful variance.

Mitchell (1974) reviewed a number of studies similar to those cited including the two studies mentioned above and each reported similar findings. He concluded that "Almost every test of the valence model produced strong significant

findings. Also, the more accurately the investigation reflected the original Vroom model, the better the results. Thus, we have fairly convincing evidence that this model has predictive utility" (Mitchell, 1974, p. 1058).

How this conclusion was reached seems unclear. In Mitchell's own study (with Allbright, 1972), the most significant findings were achieved with a deviation from Vroom's model. Furthermore, correlation with a global satisfaction rating provides very little evidence of predictive utility - what makes the model superior to the global rating itself, for example.

Mitchell (1974) did note one discordant finding. In Sobel's (1971) study, he found subjects in the low (although presumably not negative) instrumentality, low valence condition to be more positive than those in the low instrumentality, high valence condition - a finding contrary to the $\sum_{IV}$ formula predictions.

Kopelman's (1979) later studies (he reported three separate studies in his 1979 paper) bore out Sobel's (1971) findings and Kopelman provided a rationale for this discordant finding. Kopelman (1979) drew on the work of social and clinical psychologists to explain why low expectancies for highly valued outcomes would lead to dissatisfaction. He quoted Stotland as capturing the essence of the argument, "The lower an organism's perceived probability of attaining a goal, and the greater the importance of that goal, the more the

organism will experience anxiety ... Anxiety is a state in which there is physiological arousal and subjectively negative affect" (quoted in Kopelman, 1979, p. 300).

Kopelman (1979) had thus detected a flaw in the Vroomian model and consequently posited a discrepancy model ($\sum E - \sum V$), depicted in Figure 6, rather than what he described as the traditional Vroomian multiplicative model ($\sum EV$), depicted in Figure 7.

Kopelman (1979) provided a thought provoking argument, although his methodology and his alternative model are open to criticism on a number of grounds. Firstly, his representation of the traditional model was, in any case, inaccurate. He used expectancy scores instead of instrumentality scores. This made no allowance for negative scores, and although he maintained that $\sum EV$ and $\sum IV$ represent similar functional relationships, the predictions of a model with negative scores are dramatically different from one without (see Figure 8). Similarly, he made no allowance for negative valence. In effect, his low valence score represented indifference to an outcome, whereas some outcomes may be actively disliked.

Consequently, the traditional valence model would predict lowest levels of satisfaction occurring where individuals rate instrumentalities high for negatively valued outcomes or rate instrumentalities negatively for highly valued outcomes.

Figure 6. Kopelman's directionally different expectancy theory predictions of job satisfaction. (Reproduced from Kopelman, 1979, p. 303).

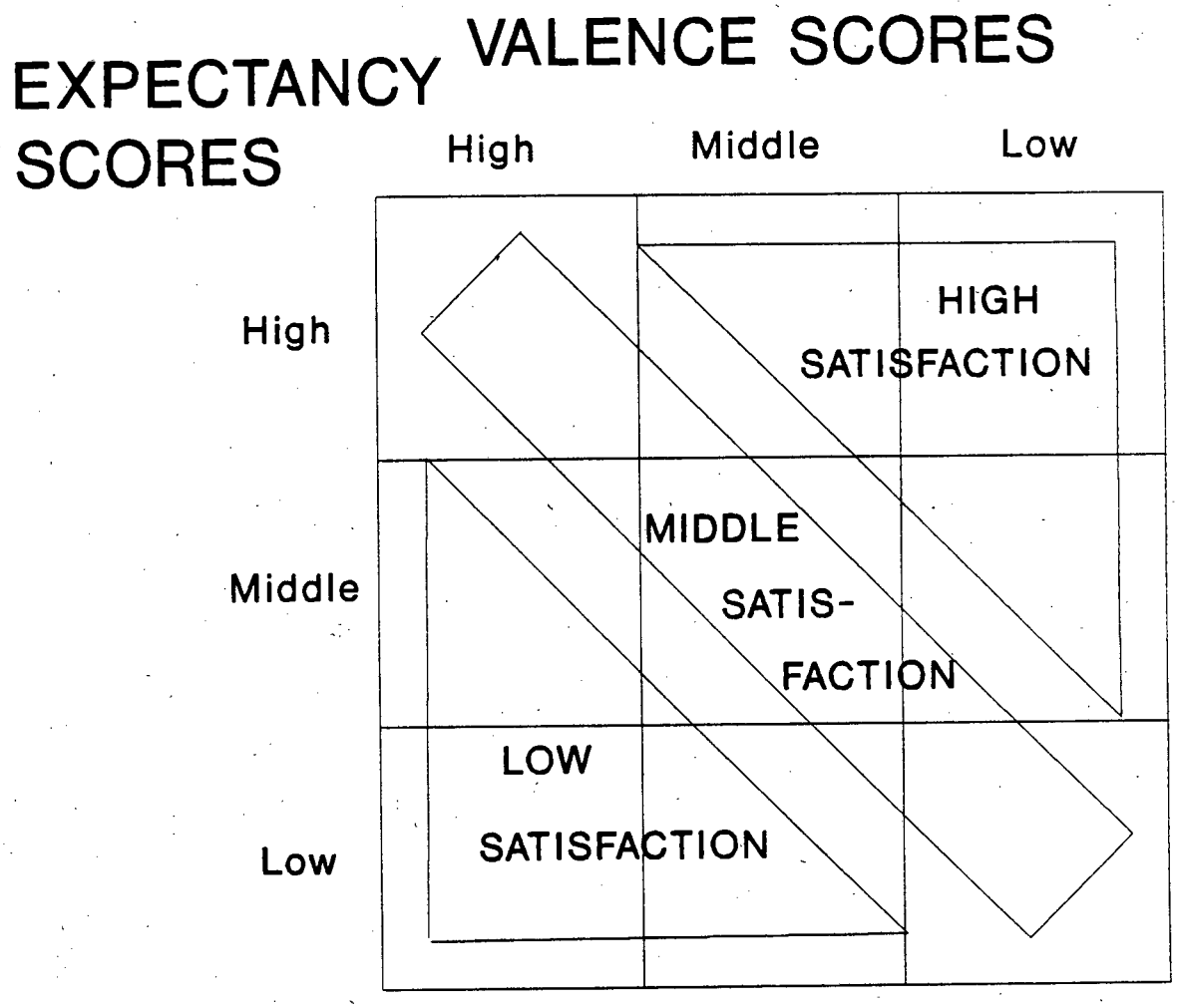
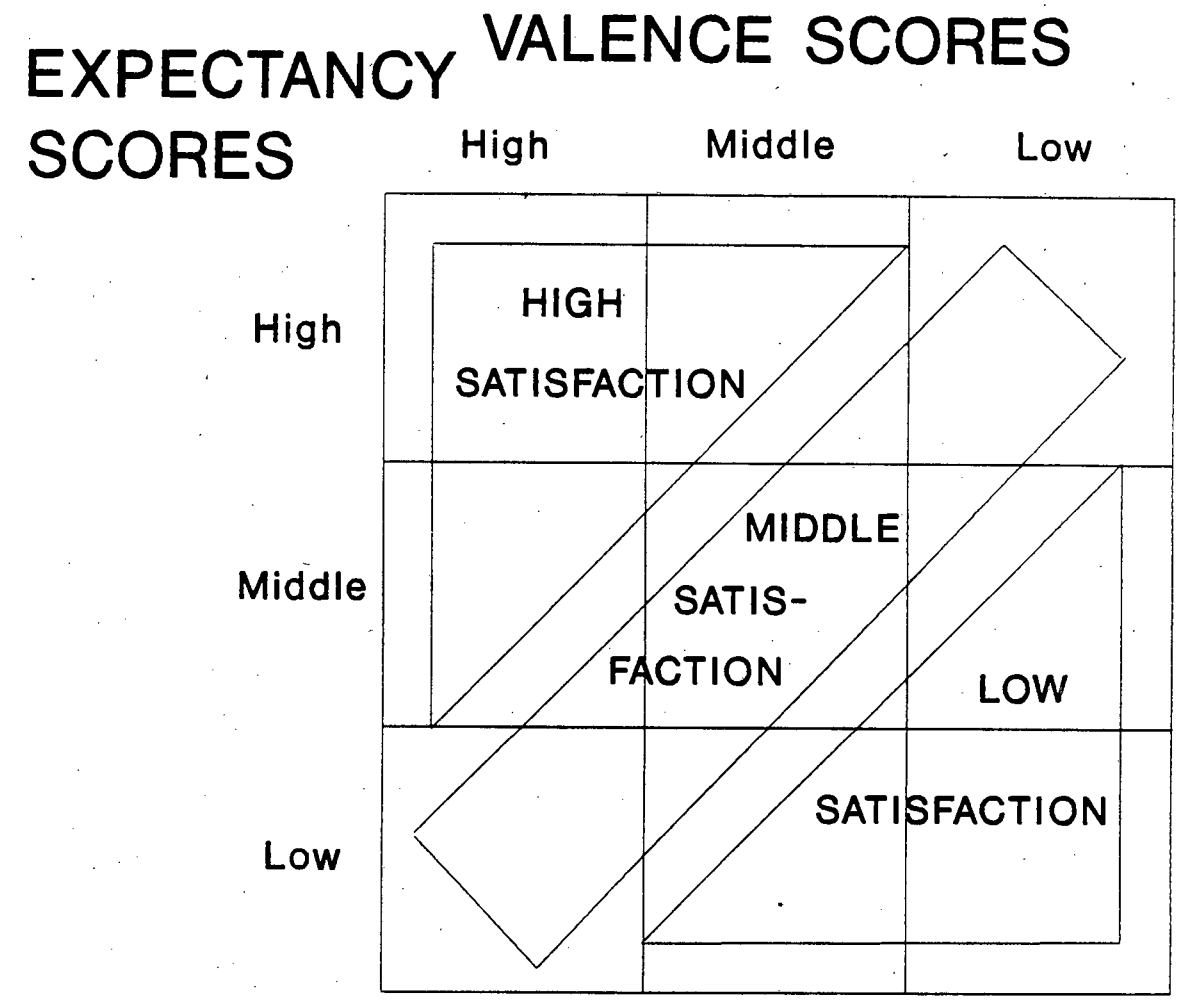


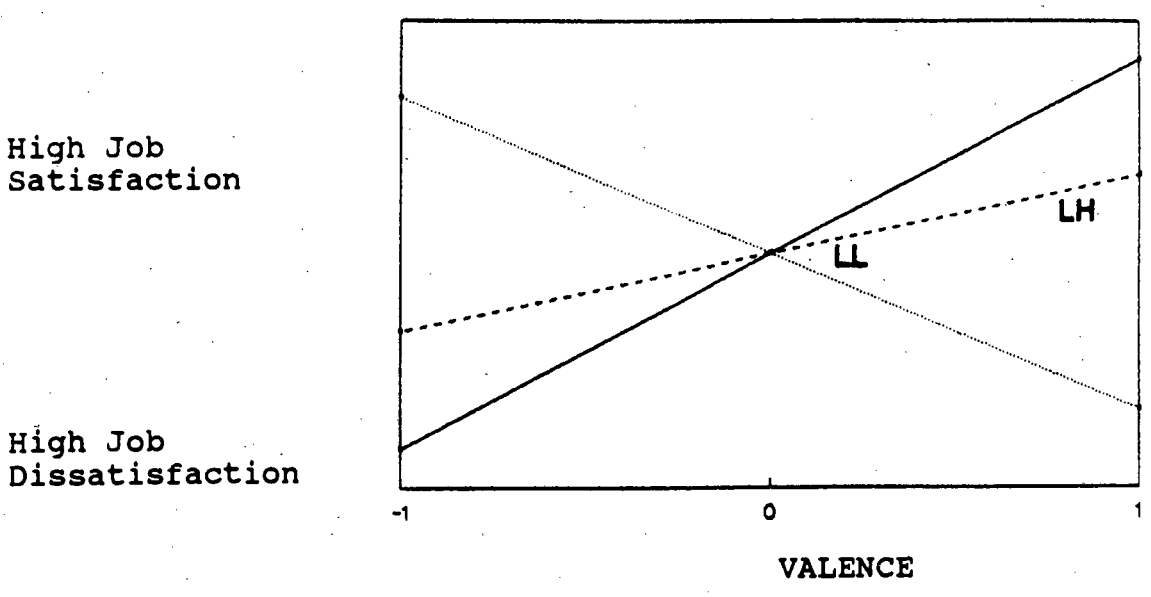
Figure 7 Traditional expectancy theory predictions of job satisfaction. (Adapted from Kopelman, 1979.)



Lowest satisfaction would not occur among individuals with low "expectancies" for lowly valued outcomes as Kopelman contended. In fact, contrary to Kopelman's contention in the Vroomian model, the extreme of highly negatively valued instrumentalities for highly negatively valued outcomes would lead to high positive satisfaction when multiplied.

A final problem with Kopelman's (1979) methodology plagues all research into Vroom's models, particularly where (as in this case) alternative models are compared. The problem centres around the multiplication of instrumentalities and valencies where the measurement procedures used do not meet the requirements for interval, much less ratio scales (Mitchell, 1974, 1982). According to some authors, ratio scales with a rational zero point are required if we wish to multiply Is and Vs with any validity (Mitchell, 1982).

Over and above these methodological considerations which must cast doubt on Kopelman's (1979) conclusions, his proposed model (Figure 6) seems to describe an unlikely scenario. According to the model, highest satisfaction occurs where expectancies are high for outcomes with low valence. Surely this is unlikely, as satisfaction must be greater where there is a high expectancy for highly valued outcomes.



Key: _____ High positive instrumentality

__ __ __ Low positive instrumentality

--------- Moderate negative instrumentality

LL A point with low positive instrumentality and low positive valence

LH A point with low positive instrumentality and high positive valence

Figure 8 Graphic representation of the $\sum$IV model predictions of job satisfaction for three levels of instrumentality

Notes:

1. The graph demonstrates how low positive instrumentality has no functional similarity to negative instrumentality in the $\sum$ IV model.
2. LL and LH represent the predictions of the $\sum$IV model which run contrary to empirical findings.

Mitchell (1982) reviewed a further three studies, all of which had findings in line with those already discussed. What then can be concluded from this review? Unfortunately, the body of literature reviewed provides only weak support for the model and has presented more questions than answers. There remain unsolved problems with the measurement of variables which need to be addressed before the model can be represented with any validity (Mitchell, 1974, 1982). Furthermore, there remains a need to relate the model to a variety of criterion variables (besides other estimates of job satisfaction) before its validity and contribution can be established unambiguously. Finally, on a theoretical and an empirical level, the model does seem to make some unrealistic predictions (Stobel, 1971; Kopelman, 1979). Whatever the shortcomings of the expectancy models the research they have generated has made one fact clear, a fact of immediate relevance, that job satisfaction and work related values are inextricably bound.

The foregoing discussion attempted to provide some insights into the nature and causes of job satisfaction. Much of the research into job satisfaction has, legitimately, regarded job satisfaction as an end in itself. Job satisfaction becomes an even more relevant variable for study, however, when the implications of job satisfaction or dissatisfaction for subsequent behaviour are considered.

The Consequences of Job Satisfaction

Research into the consequences of job satisfaction has focused, similarly to that into job involvement, on the relationship between job satisfaction and work performance, turnover, and absenteeism, and with a further group of variables that might be described as quality of life variables - for example, physical and mental health.

Job Satisfaction and Performance

Of the numerous studies of job satisfaction, those generating the greatest controversy were possibly studies attempting to show job performance to be a consequence of job satisfaction (Greene, 1972). The pervasive belief that these variables are so related may be traced back to the development of the Human Relations Movement (Luthans, 1981) and in particular the famous (and, in terms of research methodology, infamous!) Hawthorne studies (Greene, 1972). However, subsequent empirical studies have almost without exception found little or no evidence of the hypothesised relationship between satisfaction and performance (Greene, 1972; Mitchell, 1979; Meyer, Paunonen, Gellatly, Goffin & Jackson, 1989; Locke, 1983). Iaffaldano and Muchinsky (1985), in a meta-analysis of 74 studies, showed the overall population

correlation estimate of the relationship between job satisfaction and performance to be .17. This figure represents less than three percent common variance between satisfaction and performance.

The reasons for these somewhat counter-intuitive findings become clear if the psychological determinants of job performance are examined. Locke (1970, 1983) maintained that (as a premise) goals and intentions are the most immediate motivational determinants of task performance, and that where external events and consequent satisfaction or dissatisfaction affect behaviour it is by affecting the goal setting process. In Locke, Cartledge and Knerr (1970), five separate studies are reported which provide some support for these theoretical links. Thus an understanding of how job satisfaction may affect subsequent performance requires an understanding of the goal setting process.

Vroom's (1964) motivational model may provide a reasonable understanding. To recapitulate, the model states that the force to perform an act (F) is a function of the expectancy that the act will be followed by an outcome (E) multiplied by the valence of that outcome (V), in short that $F = \sum EV$. Previous experiences of job satisfaction may affect the equation by indicating what job outcomes are really valued (that is, previous satisfaction may affect the valence attached to a goal). Job satisfaction would on the other hand be unlikely to affect the expectancy term in the equation.

Expectancies according to the equation may have an equally strong role in determining motivation (F) as that of valencies. Consequently the potential impact of job satisfaction on F (via its effect on valence) would in any case be limited. (Note that it is only the theoretical impact of job satisfaction on intentions to perform and not performance per se that have been discussed thus far.)

But, given that job satisfaction may play a theoretical role in predicting motivation to perform, there are a number of extraneous variables that would further reduce the impact of job satisfaction on actual job performance.

Firstly, high satisfaction in the past may have been caused by factors other than high production. If past satisfaction is attained from low productivity (for example, where a person actually enjoys his/her job because s/he can set and attain easy goals) or despite low productivity (where, for example, satisfaction is derived from relationships with co-workers or from pay), then there is no reason to expect high performance in the future (Locke, 1970, 1983).

Secondly, what brought satisfaction in the past may not bring satisfaction in the future. Changes or anticipated changes in the organisational environment or changes in the individual's own value structure or beliefs may make a past relationship between hard work and satisfaction meaningless and affect an individual's subsequent goals and behaviour (Locke, 1970, 1983; Locke, Cartledge & Knerr, 1970).

Thirdly, in response to poor performance which s/he finds unrewarding, or high performance s/he finds rewarding, an individual may take any number of actions besides attempting to perform at high levels. For example, instead of trying to improve, s/he might muddle along or resign (Locke, 1970, 1983).

Fourthly, the individual may not have the knowledge or abilities to improve performance, even if s/he does attempt to (Locke, 1970, 1983), or may not be able to due to organisational constraints such as inadequate work facilities, restrictive policies, or lack of authority (Greene, 1972).

Surprisingly, while the hypothesised satisfaction-causes-performance contingency has come under increasing criticism, the converse hypothesis has gained ground - that high performance leads to job satisfaction (Locke, 1970, 1983; Greene, 1972). According to this theoretical position, rewards are an intervening variable in that job performance will result in job satisfaction in as far as it entails or leads to the attainment of an individual's important job values. Both Locke (1970, 1983) and Greene (1972) cite a number of studies which provide support for this standpoint.

Job Satisfaction, Turnover and Absenteeism

Returning to Locke's theoretical understanding of satisfaction as an emotional response with roots in the nature

of human evolution, the most obvious behavioural prediction consequent to dissatisfaction would be avoidance, hence turnover or absenteeism (Locke, 1983, Mathieu & Hamel, 1989). A great deal of empirical research has in fact provided generally consistent support for this proposition (Brooke & Price, 1989; Farkas & Tetrick, 1989; Mitchell, 1979; O'Reilly & Caldwell, 1980; Locke, 1983; Morris, Sherman & Snyder, 1989). Reported correlations tend, however, to be relatively low, with satisfaction usually accounting for less than sixteen percent of the variance in absenteeism and turnover (Locke, 1983). As was the case with research on the relationship between job involvement and absenteeism and turnover (see Chapter Four) research may have been hindered by the variety of ways in which absenteeism and turnover may be defined.

Job Satisfaction and Quality of Life

Job satisfaction has been related to a number of variables that might be classified as quality of life variables. These include general life satisfaction, physical health and longevity, and mental health. Tait, Padgett and Baldwin (1989) in their review cited 34 studies (with a combined N = 19811) reporting relationships between job and life satisfaction. Khaleque and Rahman (1987) and Steiner and Truxillo (1989) provided further evidence of the relationship.

Once again values proved to have a moderating influence in the relationship. The more work was valued, the closer job satisfaction was related to life satisfaction (Steiner & Truxillo, 1989). While Steiner and Truxillo tested the effect of values directly, Tait, Padgett and Baldwin (1989) inferred that the increasing value women placed on work was responsible for the greater correlation between job and life satisfactions observed for women in the post-1974 studies as opposed to the pre-1974 studies.

Most of the studies linking job and life satisfaction, however, are correlational and do not imply causality. Locke (1983) suggests that emotional generalisation or "spillover" might in fact work in both directions so that work attitudes may affect attitudes to one's family (for example) and vice versa.

Studies relating satisfaction to physical and mental health and to longevity have also been primarily correlational although they have consistently yielded positive correlations. Both Locke (1983) and Khaleque and Rahman (1987) cite numerous studies supporting this contention. An example is the study by Palmore (reviewed in Locke, 1983) where the single best overall predictor of longevity was work satisfaction ($r = .26$, $N = 268$). This proved a stronger predictor than such variables as physical functioning and tobacco use. Savery (1989b) found that people with low job satisfaction tended to

suffer from ill health and feelings of fatigue, were restless, unable to concentrate and felt irritable.

In conclusion, the study of job satisfaction is undoubtedly an important one. From a managerial perspective, an organisation ignores its employees' job satisfaction at its own cost in terms of turnover and absenteeism (although not necessarily in terms of performance); while for an individual, job satisfaction makes an important contribution to overall life satisfaction and may be implicated in his/her levels of both mental and physical health.

Job Satisfaction and Job Involvement Contrasted

Intuitively, one might expect job satisfaction and job involvement to be related. As the two dependent variables to be measured in this study, they have been considered in some depth and both variables have emerged from the investigation as complex in nature, with a variety of determinants and in turn having a variety of effects on individual attitudes and behaviours. In order to clarify this situation, it is necessary at this stage to highlight what might be the important differences between these variables.

Previous research has shown measures of job satisfaction and job involvement to be factorially distinct (Lawler & Hall, 1970; Rabinowitz & Hall, 1977) and at the same time, to be

significantly correlated (Lodahl & Kejner, 1965; Rabinowitz & Hall, 1977; Porat, 1979). Reported correlation coefficients vary quite widely, and with facets of satisfaction measured from about r = .27, p<.05 to r = .62, p<.001 (Rabinowitz & Hall, 1977). Furthermore, satisfaction with intrinsic facets of the job (in particular the work itself), seems to correlate more highly with job involvement than satisfaction with extrinsic job facets (such as salary). This conclusion is consistent with results reported in studies reviewed by Rabinowitz and Hall (1977) and with the results reported by Porat (1979).

In fact, Porat (1979) reported satisfaction in Herzbergian terms of motivator and hygiene variables, but the variables described seem by and large to be analogous to intrinsic and extrinsic variables. Porat went further in showing that the correlation between job satisfaction and involvement may be reduced to insignificance when their correlation with organisational factors are partialled out. So, job involvement and job satisfaction clearly have some common determinants which account for the correlation between them.

A speculative example may demonstrate how this correlation occurs while involvement and satisfaction remain essentially different responses. Let us consider, for example, possible responses to a challenging job situation. As preludes to this discussion it may be recalled that job

involvement seems more strongly related to intrinsic than extrinsic satisfaction; that mental challenge is a strong determinant of job satisfaction (Locke, 1983); and that job involvement is related to higher order need strength (Rabinowitz & Hall, 1977) and to a growth orientation (Moch, 1980).

A challenging job situation may result in job satisfaction, if the individual can cope with it, as it affirms his/her efficacy and may be associated with concrete rewards. On the other hand, a challenging situation is likely to be, to some extent, a novel one and to successfully cope with it the individual may have to try new responses. Essentially it becomes a learning/growth experience and where higher order needs are being met the individual is more likely to become involved in the job. In conclusion, it seems possible that the same job characteristic may give rise to two clearly dissimilar responses, job satisfaction and job involvement.

Present Research Aims with Respect to Job Satisfaction

As has been mentioned, job satisfaction is included in the study primarily as a dependent variable and in order to test the relationship suggested by Schein (1985) between career orientations and job satisfaction. That is, to test whether job satisfaction is dependent upon having an

appropriate career anchor/orientation for one's job. The discussion in this chapter on the relationship between job satisfaction and values would appear to give the proposition some credence as self-perceived values are an integral component of career anchors/orientations. A subsidiary aim is to assess the relative levels of job satisfaction experienced by members of different South African professional groups.

CHAPTER SIX

RESEARCH PROBLEMS AND HYPOTHESES

Previous chapters have outlined in broad the research aims of the present study. In this chapter the research aims will be presented systematically in terms of the specific hypotheses to be tested and research problems to be investigated. The hypotheses to be proposed are extrapolations from the work of Schein (1975, 1977b, 1978, 1985), and specify the relationship between variables within each profession. Further research problems to be posed are designed to provide meaningful measurement of the variables under study, to clarify the results and provide depth to the image of South African professionals in terms of their job satisfaction, job involvement and career orientations. In this the research problems investigate differences between groups, yielding a relative profile of each of the fourteen professions in respect of the variables under study.

Research Hypotheses

The ultimate aims of this project are specific enough to be framed in terms of research hypotheses. In earlier chapters it was suggested (following Schein, 1985) that job satisfaction may be dependent upon a congruence between an

individual's career orientation and the nature of his/her work environment.

That this may be the case was supported by the discussion of person-environment fit in Chapter Two (e.g. Ansari, Baumgartel & Sullivan, 1982; Elton & Smart, 1988; Gati, 1989; Meir, Keinan & Segal, 1986; and Spokane, 1987). The research reported in Chapter Two tended to support the contention that a match between personality factors and environmental factors would result in a degree of satisfaction with the job. The environmental fit research, reported in Chapter Two, differed from the present study in the personality variables measured (Holland's (1985) typology predominating) and the environments were also classified differently. Environments in the research reported in Chapter Two were characterised by the most common personality profiles of the people in them. However, it does not necessarily follow that the personality profile most common to a particular environment should be the profile most likely to be satisfied by that environment.

In the present study the personality variables of interest are career orientations and the environments are classified by professional group. The environmental fit research reported in Chapter Two and the contextual determinants of job satisfaction discussed in Chapter Five (e.g. Bokemeier & Lacy, 1986; Hackman & Lawler, 1971; Kohn & Schooler, 1973 and Lottinville & Scherman, 1988) have shown satisfaction to be dependent upon environmental factors.

Similarly, the complex relationship between working values and job satisfaction detailed in Chapter Five (e.g. Locke, 1983; Mitchell, 1974, 1982; and Wanous & Lawler, 1972) supports the likelihood that satisfaction and career orientations may be related in the way Schein (1985) suggested.

Given the research cited and also the research reported in Chapter Three that was directed more specifically at career anchors and orientations (e.g. Eastwood, 1980; and Laber, 1982) the following hypothesis would seem to be a reasonable one. The hypothesis was tested separately for each of the fourteen professions under study but is stated broadly to avoid repetition.

> First research hypothesis: The job satisfaction of members of a professional group may be predicted by means of a career orientation.

> First null hypothesis: The job satisfaction of members of a professional group is independent of their career orientations.

The second hypothesis to be posed arose out of the apparent similarity between Schein's (1975, 1977b, 1978, 1985) description of a person "anchored" to a career and the description of a person who was highly job involved (e.g. Blau, 1987; Kanungo, 1982; Knoop, 1986; Lorence & Mortimer,

1985; and Rabinowitz & Hall, 1977). Once again, a review of the literature discussing job involvement as a product of a person-environment interaction provided prima facie support for the hypothesis. For example the work of Hackman and Lawler (1971), Brief and Aldag (1975), Misra and Kalro (1981) and Blau (1987) reported in Chapter Four all supported the contention that personality factors interacted with environmental factors to produce job involvement. Furthermore, in one of the few studies specifically investigating both involvement and career orientations, Boshoff, Hirshfeld and Kellerman (1989) found them to be related.

Consequently the following research hypothesis was proposed. Again the hypothesis was tested separately for each of fourteen professions but is stated broadly to avoid repetition.

Second research hypothesis: The job involvement of members of a professional group may be predicted by means of a career orientation.

Second null hypothesis: The job involvement of members of a professional group is independent of their career orientations.

Research Problems

The following research aims are centred on providing meaningful measurement of the variables under study and exploring differences between professional groups on those variables. The results of this research were not anticipated except in broad terms and it is thus more accurate to describe the remaining research aims as problems rather than hypotheses. These problems had to be addressed before the hypotheses could be tested for two reason. Firstly, the problems concern the psychometric groundwork necessary for valid and reliable measurement and testing of the variables and relationship featured in the hypotheses. Secondly, the picture that emerges of the people in each of the professions under study should add richness to the interpretation of analyses designed to investigate the research hypotheses.

First research problem: Instrumentation: Can job satisfaction, job involvement and the nine career orientations be measured validly and reliably?

The measurement of job satisfaction was not expected to be problematic given the long tradition of research into the construct (some of which was detailed in Chapter Five). However, as presented in Chapter Five, job satisfaction can be broken down into broad factors, for example intrinsic and extrinsic satisfaction (e.g. Locke, 1983; Hackman & Lawler,

1971; Weiss, Dawis, England & Lofquist, 1967). The job satisfaction measure used in the present study would thus be subject to a factor analysis and broken down into component factors. These factors would be used in subsequent analyses to pinpoint what components of satisfaction are related to career orientations and the differences in satisfaction experienced by members of different professions.

It was reported in Chapter Four that the meaning and measurement of job involvement has been subject to a great deal of controversy (e.g. Morrow, 1983; Blau, 1985; Knoop, 1986). The aim of establishing the reliability and validity of Kanungo's (1982) measure was therefore an important one.

Similarly the results of Van Blaricum and Beukes (1986) and Slabbert (1987) reported in Chapter Three are cause for concern as they throw doubt on the factorial validity of the Career Orientations Inventory (DeLong, 1982a, 1982b; Schein, 1985). Furthermore, evidence reported in Chapter Three that value patterns may differ fundamentally between national groups (e.g. Bluen & Barling, 1983; and Blunt, 1979) suggested that a cautious evaluation of the Career Orientation Inventory should be undertaken.

The first research problem was thus crucial to the validity of the entire study. The specific psychometric techniques employed in addressing this problem are presented in detail in Chapters Seven and Eight.

Second research problem: What differences exist in the degree of job satisfaction experienced by members of different professional groups?

The analyses investigating these differences would employ both a general satisfaction measure and measures derived from the factor analyses employed in addressing the first research problem. They would provide an index of content and contextual differences in the work experience of members of the different professions under study. The results would thus add richness to the interpretation of analyses designed to test the research hypotheses. The results were also expected to be of interest to the various professional groups particularly if they indicate any disturbingly low levels of satisfaction.

Third research problem: What differences exist in the degree of job involvement experienced by members of different professional groups?

Differences between the professions on the involvement variable would provide evidence of construct validity to the Kanungo (1982) measure. They may also be expected to provide further perspective on the results of analyses testing the second research hypothesis.

Fourth research problem: How do the professional groups differ in the strength of their orientations towards each of the factor derived career orientations?

The career orientations to be studied were subject to the results of the analyses performed in answer to the first research problem.

The results of the investigation of differences in career orientations between professions would have a number of implications. Firstly they would provide depth to the investigation of both research hypotheses. Secondly they would provide evidence of the discriminant validity of the factor derived scales. Thirdly they may provide important information for career counsellors and for the employers and managers of people within the professions under study. The implications of career orientations for the management of professionals were discussed in Chapter Three.

The profile of the professional in each of the fourteen professions under study that would emerge from investigations into the second, third and fourth research problems would also provide intriquing insights into the work experience and values of those professionals.

Delimitations

The study was limited to professionals for the reasons reflected in Chapter One. Accordingly the study was limited to accountants, architects, attorneys, dentists, dieticians,

engineers, medical doctors, nurses, pharmacists, physiotherapists, psychologists, radiographers, social workers and veterinarians who are registered as such in South Africa.

Furthermore, the study was limited to people aged between twenty-nine and forty-five years. This decision was taken firstly on the basis of Schein's (1975, 1977a, 1978, 1985) assertion that career anchors only stabilise over time. Secondly, it was decided to set an outside limit on inclusion at forty-four years on consideration of the career stage theories introduced in Chapter Two (e.g. Loevinger & Blasi, 1976; Super, 1950, 1957, 1983, 1988; Schein, 1987; Morrow & McElroy, 1987). The career stage theories indicated that the mid-career stage may be characterised by some turmoil and a reassessment of values which may have added considerable extraneous variance to the study. Thirdly, and finally, the decision was supported by data on demographic trends presented in Chapter One. The demographic data indicated that the thirty to forty-four year group may be a particularly relevant group for study.

In the following chapter the research methodology designed to meet the aims that have been documented will be introduced.

CHAPTER SEVEN

METHODOLOGY

In this chapter the focus will be on the method of investigation adopted for the study. Three sets of information will be presented. Firstly, the samples drawn will be described along with the sampling procedure and a brief rationale will be given for the age groups and sample sizes used. Details of demographic characteristics of the respondents will also be given. Secondly, the measuring instruments will be introduced, and their psychometric characteristics discussed. The Career Orientation Inventory was discussed in some detail in Chapter Three and consequently only the involvement and satisfaction measures will be introduced in this chapter. Thirdly and finally the proposed statistical analyses of the data will be presented and related to the hypotheses presented in the previous chapter.

Sample

For sampling to be carried out effectively a number of initial decisions had to be taken concerning the populations to be sampled, the age range to be sampled, and the choice of sample sizes. These decisions will be presented briefly.

Firstly, it was decided to sample as many professional groups for which reliable registers of names and addresses were available so that the sampling frame could be properly

determined. This would ensure that the groups represented a diversity of work related value systems. In the event fourteen professional groups were sampled (see Table 4, p. 151).

Secondly, it was decided to limit the age range sampled to between 29 and 45 years. As discussed in earlier chapters, this decision was based on the view that career anchors are rooted in a developmental stage theory of careers. The age range chosen would exclude younger professionals who were still in an exploratory/learning stage of career development and who, consequently, may not have developed a clear and stable career orientation. Furthermore, it would exclude most of the professionals old enough to be in an hypothesized phase of reassessment of achievements and values - the "mid-career crisis" (Patterson, Sutton & Schuttenberg, 1987; Schein, 1987: Stout, Slocum & Cron, 1988).

Thirdly and finally it was decided to draw samples of approximately 300 people per profession. (In the case of dieticians, this implied including the entire population between 29 and 45 in the sample as this population only numbered 132 people.) The choice of sample size was based on three diverse considerations:

- Sample sizes had to be within the researcher's financial and time constraints;
- Anticipated statistical analyses had to be considered. Each analysis dictated specific minimum cell sizes, for example Analysis of Variance required cells with a minimum of thirty members, the size at which

distributions tend towards normality. The research questions dictated the analyses to be performed and these in turn indicated the sample sizes to be aimed at. However, these relatively precise estimates did not translate into such precise strategy due to areas of sampling uncertainty. For example, there is no way of knowing beforehand how the sample might be distributed as regards subdivisions one might wish to include in analyses, for example categories of employer, or language, or indeed employer by language;

- The final consideration was the anticipated response rate. Non-response is a problem inherent to survey research. It is a serious problem in that it reduces the sample size and it may bias the sample in unpredictable and indeterminable ways. A rather conservative assumption of a 33% response rate was made and the final sample size would thus have to be three times greater than that dictated by statistical considerations.

The final decision, to draw samples of 300 people per profession, was a compromise based on these diverse and sometimes conflicting considerations.

Sampling Procedure

Sampling was accomplished in three stages. Firstly, professional registers were obtained from the relevant controlling body for each of the fourteen professions

surveyed. Registers were purchased from: The S.A. Institute of Chartered Accountants, the Law Society of the Transvaal, the S.A. Medical and Dental Council (controlling body for Dentists, Dieticians, Medical Doctors, Physiotherapists, Psychologists and Radiographers), the Pharmaceutical Council, and the Council for Professional Engineers. The S.A. Nurses Council and the Council for Social and Associated Workers each provided printouts of the names of their respective members in the age group requested, in random order, and the Institute of S.A. Architects allowed the researcher access to their files to personally extract the necessary information. The Teacher's Federal Council was also approached but did not respond other than to acknowledge receipt of the request for help with the research.

Secondly, a subset of people aged from 30 - 44 was extracted from each of the registers. Where birthdates were not available from the registers, an approximation of the age of members of the profession was calculated based on the first date of registration, an assumption of matriculation at seventeen and the minimum number of years of training/study necessary to qualify for registration in each profession.

In the final stage, random samples of approximately three hundred people, per profession, were drawn. The procedure used to draw random samples (following Moser and Kalton, 1972) is best illustrated with an example.

Assume a professional group may have 2100 members aged from 30 to 44, and a sample of 300 people had to be drawn. Two

thousand and one hundred, divided by 300 is seven, so the sample would be constructed by drawing the first subject, using a random number table, from the first seven names listed in the group of 2100 professionals, and then taking every seventh person listed thereafter.

This is obviously not a pure or simple random sample as each subsequent subject's inclusion is determined by the first subject chosen. However, it is an efficient and practical compromise considering the size of the populations sampled (for example, there are over 17000 nurses between 29 and 40 years old). In any case, the method may, according to Moser and Kalton (1972) be considered approximately equivalent to simple random sampling "when the list from which a systematic sample is selected can be regarded as arranged more or less at random or when the feature by which it is arranged" (in this case, alphabetical order) "is not related to the subject of the survey" (p. 83).

Mailing Procedure and Characteristics of Respondents

Each subject was sent an addressed and postage paid return envelope and a questionnaire (Appendix A) in his/her home language, if it was English or Afrikaans, and indicated on the professional register, or in the language in which their address was recorded in the register. Each questionnaire had a code written on it to identify the subject and this was

used to construct address lists of those who did not respond to the initial mailing.

Follow up letters have been shown to improve response rates (Moser & Kalton, 1972) and consequently subjects who did not respond initially were sent follow-up letters stressing the importance of their participation along with another copy of the questionnaire. Over 4000 questionnaires were sent out initially and well over 2000 were sent out in the follow-up. A breakdown of the number of questionnaires originally sent out to each professional group is given in Table 4.

One thousand nine hundred and sixty eight questionnaires were returned in time to be included in the analysis, representing an overall response rate (after excluding 203 questionnaires returned, unopened by the post office) of 48%. This may be considered a good response rate (Moser & Kalton, 1972) and far exceeds the 33% response rate expected. Table 4 also details the number of questionnaires returned unopened, and the number returned and used for each profession. The number used excludes a total of 177 questionnaires judged unreliable because more than five items were unanswered, or the questionnaire appeared to have been filled in by the wrong person or because the respondent was over 44 years old.

Over and above these, a number of questionnaires were returned too late to be included in the analysis, and thus are not reflected in the response figures. The percentage of usable returns out of the initial mailing, less those "returned to sender" was thus an encouraging 44%. The mean

TABLE 4: Initial and Final Sample Sizes per Professional Group.

Professional Group	Questionnaires sent out	Returned to sender Unopened	Questionnaires Returned and Used
Accountants	317	21	100
Architects	300	9	156
Attorneys	299	2	98
Dentists	297	16	107
Dieticians	130	13	70
Medical Doctors	307	18	118
Engineers	299	7	180
Nurses	312	18	114
Pharmacists	311	5	140
Physiotherapists	319	27	133
Psychologists	300	22	111
Radiographers	299	29	121
Social Workers	300	5	151
Veterinarians	294	11	192
	4084	203	1791

sample per professional group was 128 with an average age over the whole sample of 35.94 years. A further breakdown of the samples by demographic characteristics is given in Table 5.

Measuring Instruments

In this section, the survey instrument as a whole will be described initially. Secondly, the validity and reliability of the job involvement and job satisfaction measures will be evaluated in turn. Finally, the translation procedure used will be discussed.

The Survey Instrument

The survey instrument consisted of a covering letter, eleven demographic items, and three measuring instruments. (Appendix A is a copy of the English questionnaire. Appendix B is a copy of an Afrikaans follow up questionnaire. Original and follow up questionnaires are identical but for the covering letters.)

The covering letter gave a brief rationale for the study, explained the importance of the recipients' participation, assured confidentiality, and as an incentive to participation, offered individual feedback to respondents who might be interested. In the event, feedback was requested by and sent to over 80% of the respondents, indicating that it possibly

TABLE 5: Demographic Characteristics of respondents

Professional	N	Mean Age	GENDER		HOME LANGUAGE				EMPLOYER			
			Male	Female	Eng	Afr	Black	Other	Self	Gov	Private Sector	Retired/ Unemployed
			N	N	N	N	N	N	N	N	N	N
Accountants	100	39.56	100	0	58	38	0	4	90	3	6	0
Architects	156	35.03	147	9	76	65	0	15	101	10	45	0
Attorneys	98	35.23	91	6	38	54	1	4	86	4	7	0
Dentists	107	37.25	105	1	41	63	0	2	85	19	1	0
Dieticians	70	34.4	2	68	13	41	3	3	29	29	7	4
Medical Doctors	118	36.32	91	25	56	51	1	9	63	46	7	1
Engineers	180	35.66	177	1	94	70	0	14	27	51	98	0
Nurses	114	34.58	6	107	32	39	40	2	1	76	29	6
Pharmacists	140	35.35	67	72	65	69	2	3	61	28	42	7
Physiotherapists	133	36.52	4	128	64	61	4	3	69	34	19	10
Psychologists	111	38.32	77	32	30	79	1	0	34	59	11	2
Radiographers	121	35.71	2	119	76	38	1	6	8	49	43	20
Social Workers	151	34.61	26	125	25	94	26	5	7	59	60	17
Veterinarians	192	35.71	166	25	99	82	0	10	119	40	31	1
	1791	35.94	1061	718	767	854	79	80	780	507	406	68

Note: The gender, language and employment sector could not be identified for all respondents due to incompleted questionnaires. Consequently, the figures for the breakdowns by gender, language and employer do not total 1791.

did provide a worthwhile incentive. The covering letter for follow up questionnaires was similar to the covering letter for initial questionnaires. The follow up letter further emphasised each respondent was part of a small sample drawn to represent an entire profession, and that non-response might jeopardise the entire project.

If feedback was requested it was sent on standardised forms giving the individual respondent's scores on each career orientation, on job satisfaction and on job involvement. The mean scores, for each professional group sampled, on each variable were also included along with a brief definition of the variables. Appendix C is a copy of the Afrikaans feedback form, and Appendix D is a copy of the English feedback form.

The demographic section of the questionnaire included standard items such as age, gender and home language and also items investigating job characteristics such as employment sector and whether the respondent had remained in his/her area of professional registration. A number of items were originally drafted and used by the Human Sciences Research Council (HSRC) and are used with permission.

The measuring instruments used were the latest available version of the Career Orientation Inventory (Schein, 1985), a job involvement questionnaire (Kanungo, 1982) and the short-form Minnesota Satisfaction Questionnaire (Weiss, Dawis, England & Lofquist, 1967). The items of the job involvement questionnaire were inserted amongst those of the Career Orientation Inventory to avoid possible response sets.

Psychometric Properties of the Measuring Instruments

The psychometric qualities of the job involvement and job satisfaction measures will be assessed in turn. An assessment of the Career Orientation Inventory was already made in Chapter Three due to central role measurement of the career orientations plays in the present research objectives. Consequently it will not be subject to further discussion in this chapter.

The Kanungo Job Involvement Scale

The Kanungo job involvement scale (Kanungo, 1982) consists of ten items scored on a Likert type scale. The items were for the purposes of this study inserted among the items of the Career Orientations Inventory to mitigate against possible response sets. In order to make the response format compatible with that of the Career Orientation Inventory, the items were scored on ten point scales.

The Kanungo scale attempts to measure job involvement defined purely as a psychological identification with one's work. Consequently it retains only the four items from the twenty item Lodahl and Kejner (1965) scale that appear to tap this construct unambiguously. The Kanungo Scale is reproduced in Table 6. The first four items reflected in Table 6 were originally from Lodahl and Kejner's (1965) scale. The

TABLE 6: The Kanungo Job Involvement Scale (Kanungo, 1982), with Factor Loadings from Blau (1985).

1. The most important things that happen to me involve my present job. (.66)
2. To me, my job is only a small part of who I am. (.58) (Reverse Score Item)
3. I am very much personally involved in my job. (.46)
4. I live, eat and breathe my job. (.49)
5. Most of my interests are centred around my job. (.64)
6. I have very strong ties with my present job which would be very difficult to break. (.39)
7. Usually, I feel detached from my job. (.13) (Reverse Score Item)
8. Most of my personal life goals are job oriented. (.43)
9. I consider my job to be very central to my existence. (.53)
10. I like to be absorbed in my job most of the time. (.48)

remaining items were generated by ten graduate students under Kanungo and validated by an item analysis (Kanungo, 1982).

The figures in brackets after the items in Table 6 are factor loadings from a study by Blau (1985, N = 119).

Reliability. Reported internal reliabilities for the Kanungo scale are uniformly high. Blau (1985) has reported reliabilities based on a number of samples that range from .83 (N = 232 clerical employees) to .87 (N = 248 university administrators) and Kanungo (1982) reported an internal reliability coefficient of .87.

A test-retest reliability coefficient of .85 (N = 63) showed the scores to be stable over a three week period (Kanungo, 1982). This measure then appears to be both stable and highly consistent.

The internal reliability of the scale for the present sample was assessed during the course of this study and will be reported in Chapter Eight.

Validity. Factor analysis is an extremely versatile tool. By illuminating the underlying dimensions of an instrument, it may provide evidence of content validity, but, where two or more instruments are factor analyzed together, and shown to be measuring distinct dimensions, the analysis may also be interpreted as providing evidence of construct validity. Both approaches have been used in validating Kanungo's scale.

Factor analysis has shown the instrument to be distinct from measures of similar constructs, for example, from a measure of intrinsic motivation (Blau, 1985). The construct validity of the scale could be inferred in part from the above finding, and in part from its correlation with other measures of job involvement (Kanungo, 1982).

Factor analyses have also shown the scale to have high content validity. Blau (1985) compared three measures of job involvement. He recommended the Kanungo scale as the purest operationalisation of job involvement if it is defined as a psychological identification with one's work. The factor loadings reported earlier are from Blau's study and are high but for item seven. Blau consequently recommended the deletion of Item 7. The Kanungo measure then proved to be a unidimensional measure in contrast to other job involvement scales.

Little evidence existed concerning criterion validity (except correlations with other involvement measures) possibly due to the fact that the instrument was developed relatively recently, and possibly because the job involvement construct has so little theoretical underpinning that suitable criteria for evaluation are not readily apparent.

In conclusion, the evidence to date indicated an extremely reliable, unidimensional measure, although further validating evidence seemed called for. The present study will provide further evidence of the reliability of the instrument

and of construct and criterion validity. These findings will be detailed in Chapter Eight of this report.

The Short-Form Minnesota Satisfaction Questionnaire

The long-form Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, England & Lofquist, 1967) consists of twenty subscales measuring satisfaction with job facets such as ability utilization, advancement, compensation and responsibility. Each subscale consists of five items scored on a Likert-type scale. A further general satisfaction score was derived from the sum of the twenty items with the highest factor loadings on each of the twenty subscales. These general satisfaction items also constitute the Short-form MSQ.

The Short-form MSQ yields a general satisfaction score (the summation of all twenty items), and two factor analytically derived subscales yield an extrinsic satisfaction score and an intrinsic satisfaction score. The definitions of the terms extrinsic and intrinsic satisfaction are consisted with the way in which they are used in Chapter Five of this report. Extrinsic satisfaction refers to contextual dimensions of the job such as pay and hours worked. Intrinsic satisfaction is concerned with the content of the job itself, such as the chance to do varied work and the opportunity to put one's own ideas into practice.

Reliability. Reported Hoyt reliability coefficients show the internal consistency of the scales to be high (Weiss, Dawis, England & Lofquist, 1967). The reliability coefficients range from .87 to .92 for the General Satisfaction scale; from .84 to .91 for the Intrinsic Satisfaction scale; and from .77 to .82 for the Extrinsic Satisfaction scale. There were no reported data on the stability over time of the scores for the Short-form MSQ. However, the stability over time of the General Satisfaction scores of the short-form may be inferred directly from that of the General Satisfaction Scale of the Long-form MSQ as it uses the same items. These test-retest correlations yielded coefficients of .89 over a one week period, and .70 over a one year interval.

Validity. The format of the MSQ showed initial evidence of validity, particularly construct and content validity. Respondents are instructed to rate how satisfied they are with each facet relative to what they expected. In terms of both Evan's (1969) and Wanous and Lawler's (1972) classifications, this describes general satisfaction as the sum of the differences between goal aspirations and goal attainment. This is the operationalization of the job satisfaction construct that comes closest to the theoretical underpinnings of this study, following Locke (1969, 1983). In their study of nine different job satisfaction questionnaire formats, Wanous and Lawler (1972) found this operationalization (which

they liken to the MSQ format) to be in the top three predictors of absenteeism and overall satisfaction.

Evidence of the validity of the Short-form MSQ cited in the manual (Weiss, Dawis, England and Lofquist, 1967) were occupational group differences in mean scores (evidence of criterion validity) and the relationship between satisfaction as measured by the Short-form and a measure of satisfactoriness (evidence of construct validity).

Further evidence in favour of the Short-form MSQ was inferred from the validity of the Long-form MSQ from which its items are drawn. The validity of the Long-form MSQ has been confirmed through multiple and vigorous investigation. For example, Dunham, Smith and Blackburn (1977) compared the Long-form MSQ with the Index of Organizational Reactions, the Job Description Index, and the Faces Scales and found the MSQ to have the greatest convergent validity and to be least affected by sex and job differences.

A psychometric assessment of the Short-form MSQ using a South African sample, will be made in the course of the present study (as with the other two instruments used) and the results of these analyses will be reported in the following chapter.

Translation of the Survey Instrument

It was important to ensure that the Afrikaans translation of the English measuring instruments was exactly equivalent in

order to preserve the psychometric properties of the instruments. An Afrikaans translation of the Career Orientations Inventory and of a number of the demographic items had been made by the HSRC and these translations were used. The remainder of the survey instrument was translated by the researcher and colleagues at the University of Pretoria's Graduate School of Management. The procedure suggested by Brislin, Lonner and Thorndike (1973) was employed. First the original version was translated into Afrikaans. A second person then retranslated the questionnaire into English, and the two English versions were checked for inconsistencies. The process was repeated until the original English version and the translated-retranslated English version were identical.

Statistical Analysis

The statistical analyses to be proposed in this chapter include many powerful and sophisticated parametric techniques. The concern was expressed in Chapter One that the inappropriate and inaccurate use of statistical procedures was a common weakness of research into vocational behaviour (Fitzgerald & Rounds, 1989). Furthermore, the intention to avoid these pitfalls was also expressed in Chapter One. Consequently, before the analyses proposed in this chapter could be performed it was necessary to consider the

assumptions underlying the statistical techniques to be used and to assess the data in the light of those assumptions.

Many of the proposed analyses make use of the powerful parametric statistical techniques. The power of a statistical test is the probability that the null hypothesis will be rejected when it is actually false (Kerlinger, 1973). Unfortunately, the power of these techniques is derived in part from limiting underlying assumptions (parameters) about the nature of the data to be analysed. The parametric statistical techniques employed in this study have three assumptions in common; assumptions that samples have been drawn from normally distributed populations (normality); that there are statistically similar variances within groups (homogeniety of variance); and finally that data are derived from continuous measures with equal intervals (Kerlinger, 1973).

In practice, however, the parametric techniques have proved robust to all but gross violations of these parameters (Kerlinger, 1973; McNemar, 1969). Consequently, the following conclusions by Kerlinger (1973) were used as final guidelines in assessing the suitability of the proposed analyses. Kerlinger (1973, p. 287) states that "The evidence to date is that the importance of normality and homogeneity is overrated ... Unless there is good evidence to believe that populations are rather seriously non-normal and that variances are heterogeneous, it is usually unwise to use a non-parametric statistical test in place of a parametric one. The reason for

this is that parametric tests are almost always more powerful than non-parametric tests."

In this light the proposed analyses seem feasible. The first assumption does not appear to be violated at all. Scores on all the factor analytically derived career orientation, job involvement and job satisfaction scales (see Chapter Eight) were normally distributed over the total sample, according to the D statistic (SAS Institute, 1982). Appendix E contains the mean and standard deviation on each variable for the total sample and for each profession. The second assumption appears to be met - the variances within the groups appear to be similar for each dependent variable (see Chapter Nine). Finally, the level of measurement, based on the summated rating scales, is probably somewhere between the ordinal and interval levels of measurement, and again this does not grossly violate any assumptions.

The statistical analyses performed seem to form three distinct clusters. The first cluster of analyses was concerned with assessing the psychometric properties of the measuring instruments and laid the foundation for the remaining two clusters which directly addressed the research problems and hypotheses. The second cluster was of analyses aimed at identifying differences between groups with regard to job satisfaction, job involvement, and career orientations. The final cluster forms the heart of the thesis and was the attempt to predict job satisfaction and involvement by means of career orientation scores.

Unless otherwise stated, all statistical analyses were performed on the mainframe computer of the University of Pretoria, using the Statistical Analysis System software (SAS Institute, 1982).

Psychometric Analyses

The analysis of the psychometric properties of the measuring instruments was aimed at addressing the first research problem identified in Chapter Six. The dimensionality, and in this limited sense, validity, of the scales was assessed using factor analysis. Principle component analysis, principal factor analysis and factor analysis using the Varimax rotation were performed. The analyses were performed firstly on the items of the Career Orientations Inventory, secondly on the combined items of the Short-form MSQ and of the job involvement scale, and finally, on the job involvement items separately. Evidence of criterion validity also resulted from the further analyses, particularly from the prediction of job involvement and job satisfaction by means of career orientations.

The internal reliabilities of the scales were calculated using Cronbach's Alpha Coefficient formula (Cronbach, 1947).

Differences Between Professional Groups

The second, third and fourth research problems were all addressed using the same statistical techniques. That is, overall differences between the professional groups in their job satisfaction, job involvement and on their scores for each of the nine career orientation subscales, were tested for significance using One-way Analysis of Variance and significant differences were further isolated using the Bonferroni ranges test. The ranges, or means test, shows where significant differences lie between the means of individual cells (or in this case professions). The Bonferroni means test was used as a powerful control against the greater probability of making a Type 1 error (the experimentwise error rate), that is rejecting a true null hypothesis, when multiple comparisons are made. Comparing the means for each of the fourteen professions with the means of every other profession implied 14 (14 - 1) / 2 = 91 pairs of means to compare each with a .05 probability of a Type 1 error. Obviously the chance of making at least one Type 1 error was much higher than .05. The exact probability is apparently difficult to calculate, however, following a formula in the SAS Users Guide (SAS Institute, 1982), a pessimistic approximation can be made:

$$\text{probability} = 1 - (1 - .05)^{91}$$

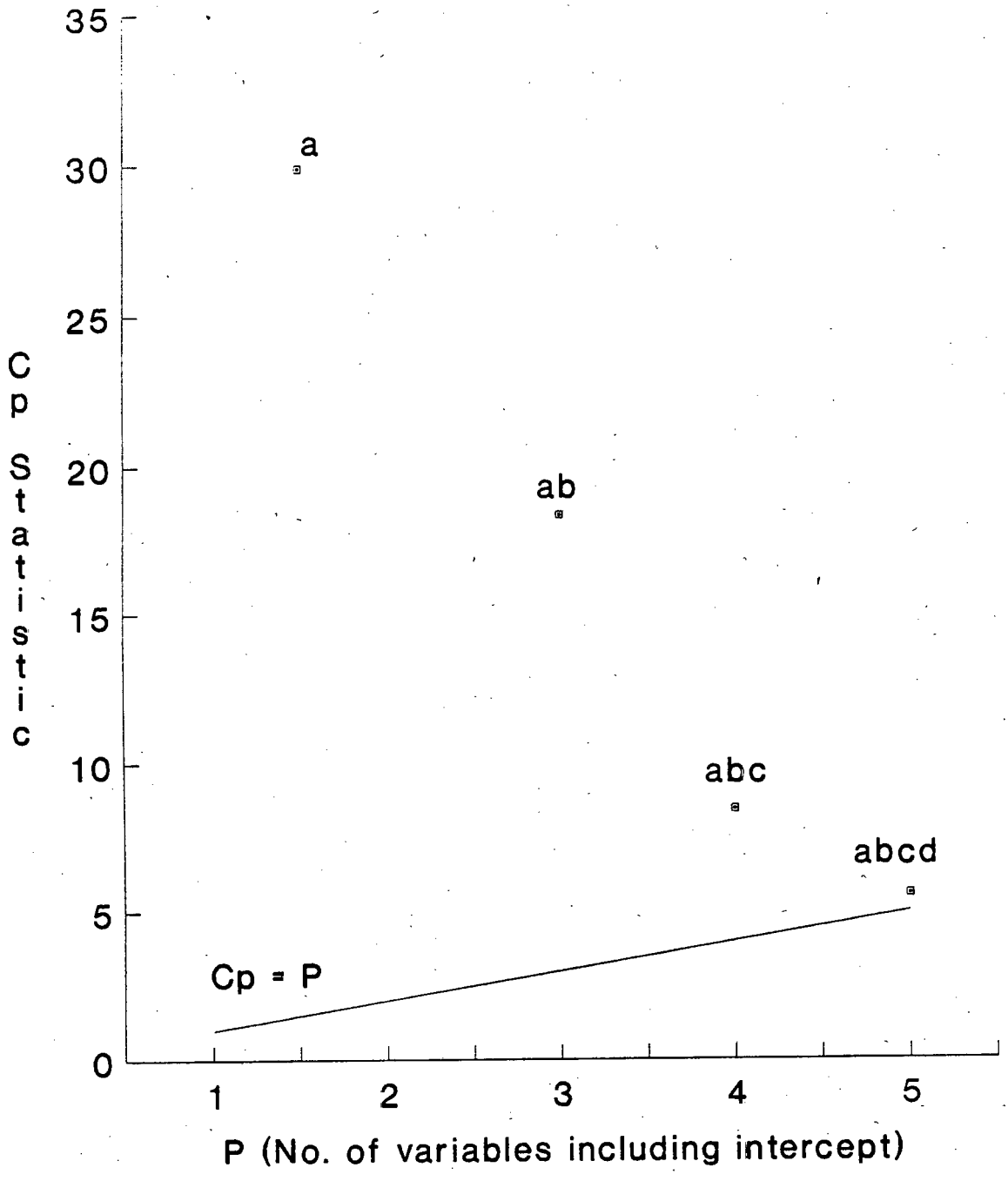
$$= .99$$

There was thus an extremely strong chance of making a Type 1 error.

The overall experimentwise error rate can be maintained at the .05 level by setting the comparisonwise error for every comparison to a sufficiently small value. The Bonferroni ranges test does just that, effectively setting the comparisonwise error rate to α/c (SAS Institute, 1982, p. 171); where c is the total number of comparisons. In this case then, the comparisonwise error rate would be taken as approximately $\frac{.05}{91} = .0005$. This allows us to isolate differences cautiously but more confidently as the chance of making at least one Type 1 error remains at .05 out of all the ninety-one comparisons.

Prediction of Job Satisfaction and Job Involvement

The first and second research hypotheses were tested using stepwise multiple regression analyses, with job satisfaction and then job involvement as dependent variables and the career orientation scales as independent variables. The significance level for entry into and for staying in the model was set at a conservative .05. The analysis was performed using the total sample and the analysis was repeated for each professional group. The Cp statistic was calculated as a further criterion in assessing the fit of the selected model. That is the extent to which a linear model (as opposed to an exponential or a curvilinear model for example) is appropriate for describing the relationship between the dependent variable and the independent variables. The Cp



Key

a = Service Dedication

b = Technical functional Competence

c = Lifestyle Integration

d = Pure Challenge

—— = Cp = P

Figure 9: Cp statistic plotted against p (the number of variables in the model including the intercept)

"prediction" implies causality and the analyses are to be taken as evidence that career orientations might in fact predict job involvement and job satisfaction, it must be stressed that the analyses are indications only, and can in no way be construed as proof of causality. This is because multiple regression can only show relationships between variables, but not the direction of causality. Thus two variables, A and B, may covary, but whether A causes B, B causes A, or both are caused by C cannot be determined from a correlation coefficient. This is particularly problematic given the present research design which is a cross sectional or correlational design.

The results for each category of analysis will be presented in a separate chapter as each category forms a conceptual whole. Discussions will be integrated into each of the results chapters in order to maintain continuity and to avoid needless repetition.

CHAPTER EIGHT

PSYCHOMETRIC ASSESSMENT OF THE MEASURING INSTRUMENTS

This chapter describes work performed in assessing the validity and reliability of the Careers Orientation Inventory, the Short-Form MSQ and the Kanungo Job Involvement Scale, using a South African sample. Where possible, attempts were made to refine the scales for use in the subsequent analyses. Each scale is addressed in turn, with the Career Orientation Inventory subject to the greatest scrutiny due to its complexity and in the light of the Bluen and Barling (1983), Slabbert (1987), and Van Blaricum and Beukes (1986) studies reviewed in Chapter Three and the consequent concerns that were expressed. As mentioned earlier, means and standard deviations obtained on each variable for the total sample and each profession are reported in Appendix E.

The Career Orientation Inventory

The Career Orientations Inventory was designed for and validated on American samples. It was not clear whether the value/attitude syndromes measured would translate meaningfully to a South African context. In their cursory factor analytic investigations of the structural stability of the instrument using South African samples, Slabbert (1987) and Blaricum and Beukes (1986) found inconsistencies. Furthermore, based on

their factor analysis of a similar instrument, the Survey of Work Values (Wollack, Goodale, Wijting & Smith, 1971), Bluen and Barling (1983) concluded that work values applicable to an American sample are not necessarily applicable to white South African males. Consequently, before valid results could be inferred from analyses using the Career Orientation Inventory, it was necessary to subject the instrument to rigorous analysis of its content and construct validity using factor analytic techniques. The factor analysis would not only reveal the dimensionality of the instrument as it stands, but it was also hoped that it might yield purer scales by utilizing the Career Orientation Inventory as an item pool. Purer scales would naturally have greater reliability which would maximize the chance of finding significant results in later analyses (Evans, 1985).

Factor Analysis of the Career Orientation Inventory

The initial aim of the factor analyses was to identify how many underlying dimensions (factors) the Career Orientation Inventory actually measures. A number of statistical guidelines exist to help in deciding how many factors best represent the underlying variance (for example, Gorsuch, 1983; SAS Institute, 1982). However, these provided only ambiguous leads in the present study.

For example, as an initial attempt, a Principal Components Analysis was performed. Based on the mineigen criterion, only components with eigen values greater than one would be considered (SAS Institute, 1982). The eigen value greater than one rule is the most popular criterion for extracting factors (Hubbard & Allen, 1989). Hubbard and Allen (1989) demonstrated that SAS performs this evaluation far more reliably than other software programs such as BMDP. Ten components were indicated by the mineigen criterion. However, together they accounted for only 61% of the common variance. Secondly, a scree test was performed. If there was a clear break in the graph it would indicate the cutoff point for the number of factors that could be extracted (SAS Institute, 1982). However, the test was also inconclusive, indicating that seven, nine or ten factors could conceivably be extracted.

Following these analyses, a Principal Factor Analysis was performed and here a seven factor solution was indicated by the proportion criterion (accumulated proportion of variance explained was greater than 1.0, SAS Institute, 1982), and this interpretation seemed to be supported by the Scree test. Following this line of thought, the unrotated factor loadings for seven factors were subjected to a Varimax rotation. However, the derived factors were largely uninterpretable.

Given these ambiguous results it was finally decided to attempt to retrieve the original nine factors the inventory

purported to measure. A factor analysis using the Varimax rotation was performed and nine factors were specified and extracted. Table 7 contains the factor loadings of the nine factor solution, after Varimax rotation. Factors one to nine respectively accounted for 16, 15, 13, 13, 11, 10, 10, 7 and 5 per cent of the total variance they explained after rotation. Again, from the relatively large drop (to below 10%) in variance explained after factor seven, it is possible that there really are only seven underlying factors.

The Varimax rotation did retrieve factors that correspond largely with the Inventory scales (Schein, 1985). However, the factor structure and by implication the Career Orientation Inventory was not entirely satisfactory.

Firstly, three items loaded most highly on factors other than those described in the original inventory. Item 8, originally part of the Entrepreneurial measure loaded on a factor better described as a Managerial Competence orientation. Item 31, originally a Lifestyle Integration item loaded on an Autonomy factor. Finally, item 40, originally a Managerial item loaded on a Pure Challenge factor.

Secondly, two items, items 1 and 39, did not reach the .30 loading criterion to be considered part of any factor (Nunnally, 1978). And thirdly, many items loaded highly on more than one factor, leading to unacceptably high factor intercorrelations (see Table 8). Despite these reservations

TABLE 7: Nine factor Structure of the Career Orientations Index obtained after Varimax Rotation.

	FACTOR								
	1	2	3	4	5	6	7	8	9
ITEM	PC	SD	AI	ENT	SG	SJ	TF	M	LS
6	.31	.23	.09	-.05	-.04	-.17	.17	.22	.06
14	.64	-.02	.02	.21	-.07	-.10	-.02	.14	.09
23	.47	.03	.11	.01	-.02	.03	.01	.01	-.06
30	.71	-.06	-.02	.25	-.04	.02	.00	.01	-.00
34	.49	.07	.01	.22	.02	.25	-.19	.24	-.11
38	.64	.09	.05	.10	-.06	-.06	.06	.06	-.08
5	-.05	.57	-.08	-.09	.02	.09	.09	.13	.18
13	.04	.69	.00	.02	-.03	.08	.06	.11	.13
21	.03	.75	-.03	-.00	.06	.09	.11	.07	.09
29	-.04	.68	-.09	-.10	.11	.11	.13	-.08	.04
37	.11	.65	-.02	-.06	.01	.15	.12	-.09	-.04
3	.03	-.05	.61	.11	-.05	-.13	.07	.15	.02
11	.00	-.05	.61	.07	-.05	-.05	.05	.11	-.04
19	.01	.03	.59	.20	.02	-.07	-.03	.00	.16
27	.19	-.24	.51	.17	.06	-.10	.01	-.16	.08
31	.16	-.12	.49	.10	.12	-.02	-.02	-.21	.29
35	-.00	.04	.53	.07	.06	-.04	.04	-.11	-.05
16	.27	-.09	.19	.69	-.05	-.06	-.07	.20	.03
24	.18	-.03	.22	.69	-.07	-.06	-.03	.05	.03
32	.33	-.07	.13	.51	-.00	-.12	-.02	.15	.04
40	.16	-.09	.22	.74	-.03	-.14	-.00	-.01	.01
20	-.03	.02	.07	.00	.76	.03	.19	.01	.07
28	-.07	.05	.04	-.06	.80	.01	.19	-.05	.02
41	-.07	.07	-.01	-.07	.77	.15	.15	-.02	.02
4	.03	.22	-.14	-.17	.06	.70	.11	.11	.13
12	.06	.21	-.09	-.06	.06	.66	.17	.11	.14
36	.11	.22	-.13	-.16	.13	.65	.14	.00	-.01
9	-.02	.13	.08	-.02	.08	.01	.70	.09	.09
17	.01	.21	-.02	-.04	.09	.06	.65	-.01	.07
25	-.05	.11	-.00	-.07	.17	.16	.54	-.11	.06
33	-.02	.03	-.07	.02	.22	.05	.54	-.11	-.04
2	.33	.17	-.13	.13	.01	.11	-.08	.44	.11
8	.28	.12	.24	.24	-.14	-.02	.13	.33	.04
10	.39	.03	.02	.32	-.03	-.18	-.06	.50	.01
18	.43	.06	-.12	.18	-.04	.41	-.18	.47	.03
26	.43	.03	-.10	.14	-.01	.29	-.21	.44	.02
7	-.05	.21	.06	-.01	.03	.10	.01	.08	.54
15	.04	.06	.35	.13	.07	.06	.04	-.04	.47
23	-.03	.12	-.01	.01	-.01	.02	.13	.03	.32
1	.12	.21	-.04	.04	-.03	.06	.20	.14	.13
39	-.11	-.11	-.26	-.08	.17	.03	-.07	-.08	.25

TABLE 8: Intercorrelations of factor derived career orientation scales (after Varimax rotation).

(N = 1791)

	PC	SD	AI	ENT	SG	SJ	TF	M	LS
PC		.046	.143*	.419*	-.096*	.087*	-.042	.588*	.014
SD			-.142*	-.156*	.127*	.378*	.279*	.131*	.216*
AI				.371*	.047*	-.234*	.050	-.002	.174*
ENT					-.111*	-.242*	-.103*	.384*	.076*
SG						.196*	.337*	-.112*	.093*
SJ							.237*	.259*	.138*
TF								-.097*	.170*
M									.071*

KEY:
- PC = Pure Challenge
- SD = Service/Dedication
- AI = Autonomy/Independence
- ENT = Entrepreneurship
- SG = Security - Geographic
- SJ = Security - Job
- TF = Technical/Functional compEtence
- M = Managerial Competence
- LS = Lifestyle Integration

* P>.05

the nine factor structure was adopted for the subsequent analyses as it was superior to the original scale pattern (Schein, 1985), for which, correlations between scales were even higher.

The Career Orientation Inventory would appear to require new item development and further validation, certainly if it is to be used with South African samples.

Interpretation of Derived Factors

The final derived scales are not identical to the Career Orientation Inventory Scales, and it was therefore necessary to provide a new interpretation of each factor. The interpretations were based on the items that made up the factors and their item loadings. The meaning of items with highest loadings were given greatest stress in the interpretation of a factor. Consequently, the items and their factor loadings (in brackets) are included in tables that accompany this section.

The factor derived scales are similar to the original scales of the Career Orientation Inventory, and to maintain continuity the original labels have been retained with one exception. The exception is the Pure Challenge orientation, which was reinterpreted as a Challenge/Competition orientation for the reasons documented below.

Factor One: Challenge/Competition. The Pure Challenge orientation was substantively unchanged except for the addition of Item 34 (see Table 9). On closer inspection, this factor was not simply a need for challenge per se. Although challenge is integral to this factor the stress is on success, particularly in terms of competing with and winning out over others (or implied others) rather than simply overcoming more situational or objective hurdles, or reaching objective criteria for excellence. In consequence this orientation was reinterpreted as a Challenge/Competition orientation. This orientation seems to be analogous to the need for achievement (the focus on success) with something of the need for power (the emphasis on winning and competition) (McClelland, D.C., 1961, 1970). This of course is personalized power rather than social power.

Extrapolating from this, a person with this orientation needs constant challenge in a competitive environment and needs constant affirmation that he/she is winning despite tough opponents and tough problems. From the interpersonal context in which competition is valued and in which being a 'high-level' general manager is considered rewarding, it seems that success itself may not be sufficient. A person with this orientation needs above all to be seen (recognized socially) to be successful. This factor interpretation has more in common with Derr's (1986) "getting-ahead" orientation than with Schein's (1985) "Pure Challenge" definition.

TABLE 9: Items loading under factors one and two Challenge/Competition and Service/Decication (factor loadings after Varimax Rotation are given in brackets).

Factor One: Challenge/Competition

Item 6 Working on problems that are almost insoluble is ... (.31)

Item 14 Competing with and winning out over others is ... (.64)

Item 23 The only real challenge in my career has been confronting and solving tough problems, no matter what area they were in. (.47)

Item 30 Competition and winning are the most important and exciting parts of my career. (.71)

Item 34 I will feel successful in my career only if I become a high-level general manager in some organization. (.49)*

Item 38 I feel successful only if I am constantly challenged by a tough problem or a competitive situation. (.64)

Factor Two: Service/Dedication

Item 5 The use of my interpersonal and helping skills in the service of others is .... (.57)

Item 13 Using my skills to make the world a better place to live and work in is ..... (.69)

Item 21 Being able to use my skills and talents in the service of an important cause is .... (.75)

Item 29 I have always sought a career in which I could be of service to others (.68)

Item 37 I want a career in which I can be committed and devoted to an important cause. (.65)

Note: * This item was part of the original Management Competence Scale. Note, however, the stress on success.

Factor Two: Service/Dedication. This factor is identical to the original Service/Dedication scale of the Career Orientation Inventory (see Table 9). It describes an altruistic desire to serve others and to use one's skills to the benefit of the greater society. There is a concern to be committed to broad social values and causes. The primary concern to a person with this orientation is that society or generalized others are benefiting from the exercise of his/her skills.

Factor Three: Autonomy/Independence. This f describes a desire to do what one wants, when one wants and how one wants (see Table 10). Organizational rules and restrictions are an anathema to this orientation. A person with this orientation desires above all the independence to determine his/her own career role(s).

Again, this factor is substantially the same as the original Autonomy/Independence scale of the Inventory, barring the addition of Item 31 which seems to have been obviously misplaced originally.

Factor Four: Entrepreneurship. This factor is the same as the original Entrepreneurship scale except that it lost one item to the Managerial Competence factor (see Table 10). It

TABLE 10: Items loading under factors three and four (factor loadings after Varimax Rotation are given in brackets).

Factor Three: Autonomy/Independence

Item 3 The chance to do things my own way and not be constrained by the rules of an organization is .... (.61)

Item 11 A career that is free from organization restrictions is ... (.61)

Item 19 A career that permits a maximum amount of freedom and autonomy to choose my own work, hours, etc., is ..... (.59)

Item 27 During my career I have been mainly concerned with my own sense of freedom and autonomy. (.51)

Item 31 A career is worthwhile only if it enables me to lead my life in my own way. (.49)*

Item 35 I do not want to be constrained by either an organization or the business world. (.53)

Factor Four: Entrepreneurship

Item 16 Building a new business enterprise is .... (.69)

Item 24 I am always on the lookout for ideas that would permit me to start and build my own enterprise. (.69)

Item 32 Entrepreneurial activities are the central part of my career. (.51)

Item 40 I have always wanted to start and build up a business of my own. (.74)

Note: * This item was previously a Lifestyle Integration item, but even superficially it can be seen to tap an autonomy factor.

expresses a desire to create and nurture a business enterprise of one's own. This factor is not a pure one and is particularly problematic in view of its high correlation with the Autonomy/Independence factor, the Managerial Competence factor and with the Challenge/Competition factor. These three constructs are distinct and important (certainly when isolating the career anchors most salient in the commercial environment). However, the distinction is a very fine line and further work on the Career Orientation Inventory might be profitably spent refining these concepts.

It might be expected that a desire for autonomy and a desire to build something of one's own would be related and thus, if anything, it is surprising that the correlation between the Autonomy/Independence and Entrepreneurship factors is not higher. With r (1790) = .37, p = .0001, the common variance is a little over ten percent. Apparently restrictions and constraints are not at issue here, but that they are not imposed by external agencies is.

One might also have expected the correlation between the Entrepreneurship and Managerial Competence factors intuitively [r (1790) = .38, p = .0001]. The manager and the entrepreneur have a number of roles in common, and both coordinate and integrate human and material resources. The difference is that the entrepreneur is creative, s/he initiates and builds, while the manager's role (at least as operationally defined by the managerial competence factor) has greater stress on

interpersonal aspects of supervising and influencing people and on controlling and maintaining an enterprise. A content analysis of the items loading on the Managerial Competence factor also revealed an emphasis on an holistic control. The bias is towards an ideal of general management (originally this was possibly in order to set this scale apart from the Technical/Functional Competence Scale), and to controlling "entirely", "at all levels" and, "in various functions", the "whole organization". This need for total control is not only absent from the Entrepreneurship factor, but the one item from the original scale that did mention the word "entirely" loaded more highly on the Managerial Competence factor. Although entrepreneurs would seem to be in an ideal position to assume a high degree of control, it certainly does not seem to be a driving value.

The high correlation between the Challenge/Competition and Entrepreneurship factors [r (1790) = 0.42, p = .0001] is again not unexpected. Building a new enterprise is obviously a challenging task! The subtle difference here is that Entrepreneurship is concerned with novelty and creative tasks while the Challenge/Competition factor stresses competition and success. Nevertheless, the correlation is unacceptably high, and Item 32, is a specific problem as it loads above .30 on both factors. This is the level at which an item might be considered part of a factor (Gorsuch, 1983).

Factor Five: Geographic Security. The Geographic Security orientation proved to be a relatively pure factor, identical to the original scale (see Table 11) and with an exceptionally high internal consistency considering it consists of only three items. The interpretation is self evident - a desire to remain in a specific geographical area - and unchanged from the original.

Factor Six - Job Security. As with the Geographic Security factor, this factor has a clear interpretation and is internally consistent (see Table 11). However, it is not quite as independent, correlating highly with the Service/ Dedication factor [r (1791) = 0.38, p = .0001]. It is possibly the aspects of commitment and a need to be part of something greater than oneself that are common to both. This factor describes a need for a relationship with an employer that is characterised by stability, and commitment in terms of guaranteed employment. The implication is that in return the person with this orientation will be a reliable employee and by and large accept an organisational definition of what work he/she will do. Similarly, the Service/Dedication oriented individual needs to be committed to a cause and in a sense is subservient to others' definition of what should be done due to their need to be of service.

TABLE 11. Items loading under factors five, six and seven - Geographic Security, Job Security and Technical/Functional Competence. (Factor loadings after Varimax Rotation are given in brackets.)

Factor Five: Geographic Security

Item 20 Remaining in one geographical area rather than moving because of a promotion is .... (.76)

Item 28 It is more important for me to remain in my present geographical location than to receive a promotion or new job assignment in another location. (.80)

Item 41 I prefer to work for an organization that will permit me to remain in one geographical area. (.77)

Factor Six: Job Security

Item 4 An employer who will provide security through guaranteed work, benefits, a good retirement programme etc., is .... (.70)

Item 12 An organization that will give me long run stability is .... (.66)

Item 36 I prefer to work for an organization that provides tenure (life-time employment). (.65)

Factor Seven: Technical/Functional Competence

Item 9 Remaining in my specialised area as opposed to being promoted out of my area of expertise is ... (.70)

Item 17 Remaining in my area of expertise throughout my career is .... (.65)

Item 25 I will accept a management position only if it is in my area of expertise. (.54)

Item 33 I would rather leave my company than be promoted out of my area of expertise. (.54)

What is noteworthy is the low correlation between this factor and the Geographic Security factor. These factors share less than 4% common variance. They are clearly distinct constructs (in terms of their factor structure anyway) yet throughout Schein (1985) and DeLong (1982a, 1982b) discuss them as if they were simply alternative expressions of the same need viz. for security. It seems more likely, however, that they are two independent and independently salient career orientations.

Factor Seven: Technical/Functional Competence. This factor is the same as the original scale (see Table 11) except that item one was dropped as it did not load highly on any of the factors. This factor does not seem to be measuring Technical/Functional Competence exactly as Schein described it. According to Schein (1985) people with this anchor find the content of their work intrinsically meaningful and furthermore, derive their identity from their craft. If the above items are tapping these meaningfullness and identity dimensions, it is indirectly at best. Rather, they seem to describe a simple need for stable and predictable job content, and a job in which the incumbent feels experienced and expert. Given this concern with stability it is not surprising that this factor correlates highly with the Geographic Security factor [r (1789) = 0.34, p = .0001]. Both factors describe a

person who wants to stick with what he/she knows, be it a specific geographical area/community or a specific job.

Another similarity between the items in these two factors and a considerable shortcoming of the questionnaire is that the items generally compare a preference (to remain in one geographical area or to remain in an area of expertise) to the alternative of a promotion. (See items 20, 28, 9, 25 and 33.) Given that one's career anchor is that which you would not give up if forced to make a difficult choice, this is still somewhat of a distortion.

The strength of a career orientation may be measured using either of two methods. Firstly, each alternative career orientation may be compared with each of the other orientations, perhaps in the forced choice format advocated by Schein, (1987b). In the Career Orientation Inventory only one alternative is considered to each orientation - promotion - a value associated with the Managerial Competence and Challenge/Competition orientations.

Secondly, the strength of each career orientation could be assessed in its own right without reference to other orientations. This method would attempt to estimate how important the value of, for example, autonomy is, but not how it compares with other values, perhaps money or affiliation. As it stands the Career Orientation Inventory uses both methods inconsistently. An implicit value judgement that appears to underly the inventory is that only the Managerial

Competence and Challenge/Competition orientations can provide meaningful rewards. Certainly there is a distortion as the questions asked are not "How important is Value X as opposed to Values Y, Z etc.?" (method one above) or "How important is Value X?" (method two above) but rather, "How important is Value X as opposed to a promotion?".

Factor Eight: Managerial Competence. This factor is quite different from the original scale, having lost one item and gained an Entrepreneurship item (see Table 12). It describes a need to have wide responsibility and control over an organisation - leading, supervising and integrating the efforts of people at all levels and in various functions. It is the control over people and resources that is important to people with this anchor, not the specific tasks that they or others do.

This scale is problematic for two reasons. Firstly, a matter of both content and construct validity, this scale hardly samples the content domain of the Managerial Competence anchor as described by Schein (1975). To recap, Schein described three components:

- Interpersonal competence (possibly implied in the scale);
- Analytical competence (possibly implied); and
- Emotional stability.

TABLE 12. Items loading under factors eight and nine - Managerial Competence and Lifestyle Integration. (Factor loadings after Varimax Rotation are given in brackets.)

Factor Eight: Managerial Competence

Item 2 The process of supervising, influencing, leading and controlling people at all levels is ... (.44)

Item 8 To be able to build something that is entirely my own product or idea is .... (.33)*

Item 10 To be in charge of a whole organization is ... (.50)

Item 18 To rise to a high position in general management is ... (.47)

Item 26 I would like to reach a level of responsibility in an organization whereby I would supervise others in various business functions and my role would primarily be to integrate their efforts. (.44)

Factor Nine: Lifestyle Integration

Item 7 Developing a lifestyle that balances my career and family needs is .... (.54)

Item 15 Developing a career that permits me to continue to pursue my own lifestyle is .... (.47)

Item 23 I have always tried to give equal weight to my family and to my career. (.32)

Note: * This item was previously an Entrepreneurship item, but unlike the pure Entrepreneurship items, it is not only concerned with starting a new business, but also with the managerial aspects of controlling the entire process, and this probably explains the shift.

It is the third component "the capacity to be stimulated by emotional and interpersonal crises rather than exhausted or debilitated by them, the capacity to bear high levels of responsibility, and the capacity to exercise authority without fear or guilt" (Schein, 1975, p. 14), that is hardly addressed at all.

The problem just described would not be of such concern if the scale was independent and psychometrically sound in its own terms. Then it might not describe a Managerial Competence orientation precisely as defined by Schein, but it might nevertheless describe a valid managerial orientation. However, and this is the second problem, this factor is not pure and unidimensional. Its high correlation with the Entrepreneurship factor has already been described, but it has an even higher correlation with the Challenge/Competition factor [r (1789) = 0.59, p = .0001]. With almost 35% common variance, those two factors cannot be seen as independent. Although the items for the Challenge/Competition factor load only on that factor, all the Managerial Competence items, bar item 8, load above .30 on the Challenge/Competition factor.

These two problems might be related in that if the person with a Challenge/Competition orientation is a competitor and a winner (especially as the factor describes these concepts in an interpersonal context) then s/he might well share with a Managerial Competence oriented individual both interpersonal and analytical competence. These are the two components of

Managerial Competence that are tapped to some extent, but it is the third and untapped dimension, of emotional stability, that might have set the manager apart from the competitor! The Managerial Competence scale needs further items measuring an emotional stability component.

Factor Nine: Lifestyle Integration. This factor describes a desire to maintain a balanced and harmonious lifestyle in which neither work nor family interests dominate the other.

Of all the original scales, this one fared the worst in the factor analysis (see Table 12). Two of the original items, items 31 and 39, did not load high enough on this factor for inclusion in the scale, and the remaining items did not load extremely highly either (compared to the Job Security item loadings for example).

A possible cause of this problem was the restricted range of responses on these items and the positively skewed distribution. This in turn may be due to the likelihood that most people would ascribe to a balanced lifestyle as a desirable end and might furthermore maintain that they were in fact striving to balance what they saw as the important facets of their lives. This would result in a ceiling effect, with most responses near the upper limit on the items and the scope for high correlations with other items proportionately diminished. These essentially technical problems become more serious in the light of the strong theoretical reservations

about this orientation that were expressed in the previous chapter.

Reliability of Factor Derived Scales

The internal reliabilities of the nine factor analytically derived scales were calculated by means of Cronbach's (1947) Coefficient Alpha. Reliability coefficients were acceptable for all the scales except the Lifestyle Integration scales. These reliability coefficients are given in Table 13.

The strikingly low reliability coefficient of the Lifestyle Integration Scale in contrast to the reliability coefficients of the other scales may be due to two factors, its restricted range and the fact that it is made up of so few items. An alternative explanation for its low reliability coefficient may be that it is an heterogeneous measure for which a measure of internal consistency (as opposed to test-retest reliability coefficients) is not meaningful (Guilford & Fruchter, 1973). However, this alternative seems unlikely if one does a content analysis of the constituent items.

In concluding this assessment of the validity and reliability of the Career Orientation Inventory, it seems that the instrument as published did not have a high validity when used with samples of South African professionals. However, with the exception of the Lifestyle Integration Factor, the

TABLE 13: Internal consistencies of factor derived scales as measured by Cronbach's Alpha coefficient.

Career Orientation	Cronbach's Alpha Coefficient
Challenge/Competition	.73
Service Dedication	.82
Autonomy/Independence	.76
Entrepreneurship	.84
Geographic Security	.86
Job Security	.82
Technical/Functional Competence	.75
Managerial Competence	.79
Life Style Integration	.45

N = 1791

factor derived scales seemed adequate for the exploratory purposes of the present study. The derived factors except for the Managerial Competence and Lifestyle Integration factors were largely independent, with constituent items loading highly and uniquely on the individual factors. Furthermore, the internal consistencies of all the factor derived scales (again with the exception of the Lifestyle Integration Scale) were acceptable. Thus it appeared that the factor derived scales could be used in the remaining analyses although results would have to be interpreted with a degree of conservatism!

The Short-Form MSQ and the
Kanungo Job Involvement Scale

The Short-Form MSQ (Weiss, Davis, England & Lofquist, 1967) and the Kanungo Job Involvement Scale (Kanungo, 1982) were investigated together as the relationship between the two scales was expected to throw light on their individual validities. From the literature reviewed in Chapters Four and Five, it was expected that the two measures would correlate slightly but be factorially distinct. If the above held true it would go some way towards establishing the construct validities of both measures. The remainder of this chapter describes the psychometric work on these scales, firstly the factor analyses performed to establish their underlying

dimensions and secondly the reliability coefficients calculated for the scales.

Factor Analyses of the Short-Form MSQ and the Job Involvement Scale

As an efficient method of investigating the scales' individual dimensionality and simultaneously checking whether they do in fact measure distinct dimensions, the thirty items from both scales were entered into a Principal Factor Analysis together.

Based on the proportion criterion (that combined the factors accounted for close to 100% of the variance) it seemed likely that there were four underlying dimensions. This expectation was supported by a Scree test (that is a plot of the eigen values) which showed a clear break between the fourth and fifth value, and only minor differences between the fifth and subsequent values. The interpretation of this plot would be that only four factors accounted for unique and substantial variance. A decision was consequently made to retain four factors and a Varimax Rotation of the axes was then carried out.

After rotation item seven ("Usually I feel detached from my job") of the Kanungo job involvement scale loaded -.23, -.06, -.24 and -.14 respectively on the four factors. With a minimum factor loading of .30 as a guideline (Gorsuch, 1983, Nunnally, 1978) item seven did not seem to be clearly part of

any of the obtained factors. This result was in line with a finding by Blau (1985). The low factor loading of this item on the job involvement factor and the fact that it had cross loadings on the other factors led to a decision to discard this item and to eliminate it from further analyses.

With this source of error variance removed the factor analytic procedure as outlined was repeated on the remaining twenty-nine items. A Principal Components Analysis was carried out to try to identify the number of underlying components measured by the two scales. The mineigen criterion (that there are as many factors as there are eigen values greater than or equal to one (SAS Institute, 1982)) indicated that there were probably four or five underlying components. A Principal Factor Analysis was then carried out, and again, based on the proportion criterion and a Scree plot it was decided to retain four factors. A final Varimax rotation was then carried out. The four rotated factors respectively explained 29.4%, 28.0%, 26,5%, and 16,1% of the common variance. The rotated factor pattern is presented in Table 14. (Items prefaced by JI are job involvement items and by JS are job satisfaction items.)

The Job Involvement Factor

From the analyses described, the Job Involvement Scale of Kanungo (Factor 1) emerged as a robust and unidimensional

TABLE 14. Final rotated factor loadings of items in the job involvement and job satisfaction scales.

Items		FACTORS 1	2	3	4
JI	1	0.59	0.06	0.05	0.03
JI	2	-0.38*	-0.01	-0.08	-0.03
JI	3	0.47	0.09	0.16	0.11
JI	5	0.70	0.00	0.03	-0.00
JI	6	0.46	0.21	0.15	0.14
JI	8	0.75	-0.03	0.01	0.04
JI	9	0.70	0.06	0.09	0.06
JI	10	0.58	0.04	0.03	0.06
JS	5	0.04	0.70	0.17	0.02
JS	6	0.03	0.74	0.16	0.03
JS	12	0.08	0.58	0.26	0.26
JS	13	0.14	0.49	0.25	0.30
JS	17	0.05	0.55	0.21	0.32
JS	18	0.02	0.45	0.24	0.08
JS	19	0.08	0.52	0.32	0.19
JS	1	0.14	0.18	0.50	0.17
JS	3	0.12	0.19	0.45	0.35
JS	4	0.13	0.23	0.55	0.16
JS	7	0.00	0.25	0.45	0.20
JS	8	0.00	0.20	0.38	0.01
JS	9	0.02	0.09	0.61	0.08
JS	10	0.09	0.20	0.45	0.05
JS	11	0.13	0.19	0.61	0.35
JS	20	0.17	0.32	0.51	0.35
JS	2	0.06	0.20	0.32	0.37
JS	15	0.10	0.32	0.34	0.69
JS	16	0.11	0.29	0.33	0.68

* Reverse Scored Item

measure. All the job involvement items load well above the .30 criterion on the job involvement factor and on no other.

This replicated Blau's (1985) finding and furthermore showed the factor structure of this scale to be stable across samples and even cultures. For example, similar factor structures were returned using samples of French and English Canadian employees (Kanungo, 1982), American nurses and various categories of university employees (Blau, 1985) and English and Afrikaans South African professionals in the present study.

The factor analysis furthermore showed the job involvement factor (Factor One) to be clearly distinct from the three satisfaction factors (Factors 2, 3 and 4), providing evidence of the construct validity of all the scales. That they have little common variance is confirmed by the low correlation between the total Job Satisfaction Scale and the job Involvement Scale [r (1790) = .25, p = .0001]. The correlations between job Involvement and the three job Satisfaction subscales are even lower. These correlations will be highly significant given the large sample size. The significance level represents the likelihood that the calculated relationship would be found in the entire population and of course the larger the sample size the more likely it is to represent the population. However, an r of .25

indicates that the two scales share less than 6.5% common variance. This is remarkably low and could probably be explained by the fact that some job characteristics are thought to affect both satisfaction and involvement (Lawler & Hall, 1970; Lodahl & Kejner, 1965). Clearly they are unlikely to be causally related. It appears rather that if someone likes his/her job it is no reason to suppose he/she is involved in it (or vice versa).

The Job Satisfaction Factors

The remaining factors are clearly three job satisfaction factors although this differs from the two factor structure the authors of the instrument originally derived (Weiss, Dawis, England & Lofquist, 1967).

Factor 2, which was labelled Extrinsic Job Satisfaction, following Weiss, Dawis, England and Lofquist (1967), measures satisfaction with environmental or contextual facets of the job. It is identical to the Extrinsic Job Satisfaction scale isolated by Weiss, Dawis, England & Lofquist (1967). This eight item factor explores relationships with superiors and co-workers, satisfaction with the working conditions, policies and reward, and the perceived opportunities for advancement.

The items assessing relationships with superiors turned out to be problematic in this sample with the large proportion of professional people who are either self-employed or

partners in a practice (over 40% of respondents fell into these categories). Missing values on these items were handled by replacing them where they occurred with the respondent's professional group's mean for the item.

The Intrinsic Job Satisfaction factor reported by the authors of the instrument (Weiss, Dawis, England & Lofquist, 1967), was broken down into two meaningful factors in the present study. Both factors described an affective appraisal of content or intrinsic aspects of the job. Factor 3 retained the Intrinsic Satisfaction label for the sake of consistency and consisted of nine items investigating inter alia how the job accorded with the respondent's values, provided a sense of self-worth, recognition and accomplishment, and utilized the respondent's abilities to the full. The final factor was labelled Autonomic Job Satisfaction and consisted of three items rating satisfaction with the degree of independence and job decision latitude the respondent experienced.

These three satisfaction factors were not independent. There are a number of cross loadings and there are substantial correlations between these derived scales (see Table 15). The correlations between subscales and the total score for the job satisfaction questionnaire (General Satisfaction) are obviously also very high as they are part-whole correlations.

TABLE 15. Correlations between job satisfaction scales.

	Intrinsic Job Sat.	Extrinsic Job Sat.	Autonomic Job Sat.
Job Sat. Total	0.88	0.89	0.77
Intrinsic Job Sat.		0.61	0.63
Extrinsic Job Sat.			0.57

The high correlations between subscales suggest that satisfaction or dissatisfaction with individual job facets tended to colour one's view of the entire job to some extent. This seems to provide evidence of the "emotional spillover" effect suggested by Locke (1983) and reported in Chapter Five. Despite the fact that the subscales are highly correlated, sharing at least 32% common variance, it was decided to retain the three factor structure as the factors appeared to be conceptually meaningful and distinct. Used in conjunction with the total scale scores it seemed that they might well throw a slightly more specific light on where differences really lay in the comparisons to be made between professional groups.

Reliability of Derived Factors

The internal consistencies of the job involvement factor, the three job satisfaction factors and of the twenty item job satisfaction questionnaire as a whole (a general satisfaction measure) were calculated by means of Cronbach's Alpha coefficient (Cronbach, 1947). The calculated reliability coefficients are given in Table 16 and are all acceptable.

TABLE 16: Reliability coefficients of the factor analytically derived job involvement and job satisfaction scales and of the general satisfaction scale (the sum of the satisfaction items).

Scale	Reliability Coefficient
Job Involvement	.83
General Satisfaction	.90
Intrinsic Satisfaction	.82
Extrinsic Satisfaction	.84
Autonomic Satisfaction	.79

N = 1791

In concluding this section of the report, it seems that further analyses using the job satisfaction and job involvement factors could be undertaken with considerable confidence in the reliability and validity of these measuring instruments.

CHAPTER NINE

DIFFERENCES BETWEEN PROFESSIONAL GROUPS IN THEIR SATISFACTION, INVOLVEMENT AND CAREER ORIENTATIONS

This chapter describes the results of the investigations into the second, third and fourth research problems. That is, it describes the differences between the groups in terms of their job satisfaction, job involvement and scores on the nine factor analytically derived career orientations. Each problem will be addressed in turn, then the chapter will be concluded with a brief synopsis of the results as they reflect on each profession individually. In this way a relative profile of each profession will be constructed, based on their individual scores relative to every other profession on each dependent variable. The effort to describe each profession in relation to the other professional groups under study will provide some perspective and a foundation to the analyses in the following chapter which test relationships between variables within each profession.

As proposed in Chapter Six, overall differences for each dependent variable were tested using one-way Analysis of Variance and the differences between specific professions were isolated using the Bonferroni ranges test. Further One and Two-Way Analyses of Variance were performed (where cell sizes were large enough) on professional groups broken down by the biographical variables Language, Sex and Employment sector.

These analyses were necessary in order to confirm that any differences identified by the initial one-way Analyses of Variance were not due to uneven distributions of the language and sex groups between the professions and of members of different employment sectors. However, to avoid detracting from the central thrust of the present study, the results of these further analyses will only be reported where it seems that the main effect of professional grouping becomes negligible in comparison to the effect of the biographical variables.

Presentation of the results of the One-way Analyses of Variance is straightforward and will be made for each dependent variable. However, the Bonferroni means test (as opposed to less stringent tests such as the Duncan Ranges Test) does not lend itself to easy summary neither by graphic nor tabular reporting for two reasons. Firstly, with this test, nonsignificance is nontransitive and thus "given three sample means, the largest and smallest may be significantly different from each other, while neither is significantly different from the middle one" (SAS Institute, 1982, p. 169). Secondly, multiple comparisons may lead to counter-intuitive results when the cell sizes are unequal. "Consider four cells labelled A, B, C and D, with sample means in the order A>B>C>D. If A and D each have two observations and B and C each have 10 000 observations, then the difference between B and C may be significant while the difference between A and D is not" (SAS Institute, 1982, p. 169).

Consequently, the results of the Bonferroni Means Tests will be presented in tables of three columns. In the first column each profession, along with its mean score on the variable under study, will be listed in turn, from the profession with the highest mean to that with the lowest. Alongside each of these professions will be a list, in the second column, of all the professions with significantly lower scores on that variable, and in the third column, of professions with significantly higher scores on that variable.

Nonsignificant differences will not be reported specifically but may be assumed to exist between professions in column one and those professions not listed immediately alongside in columns two and three. The names of the professions will be abbreviated throughout in accordance with the list of abbreviations reflected in the key to Table 18.

Differences in Job Satisfaction

The second research problem was to analyse the differences in job satisfaction experienced by members of different professions. The analysis was performed for the dependent variables, namely general job satisfaction (the summation of ratings of all the items in the Short-Form MSQ), intrinsic job satisfaction, extrinsic job satisfaction and autonomic job satisfaction.

General Job Satisfaction

Before detailing the results of the Analysis of Variance it may be useful to put the satisfaction of South African professionals into some immediate perspective by comparing them with their American counterparts where normative data are available. The manual for the MSQ gives some normative data for the Short-Form MSQ and further data for the Long-Form MSQ and its subscales (Weiss, Dawis, England & Lofquist, 1967). The general satisfaction scale of the Long-Form is of course identical to the Short-Form MSQ (Weiss, Dawis, England & Lofquist, 1967) and these normative data are used where applicable.

In comparison to their American counterparts, South African accountants had substantially higher mean satisfaction scores while the scores for engineers, nurses and social workers are substantially lower than the U.S.A. comparison group (see Table 17). Unfortunately, normative data were not available for any other comparison groups nor was there an overall comparison group that could be equated with South African professionals as a whole. From the comparisons made it does not appear that South African professionals overall differ from their American counterparts as the professional groups cited turned out to be towards the extremes of the distribution of South African professionals on this variable. For example, accountants had

TABLE 17: Comparison Between South African and American Professional Groups in terms of their General Job Satisfaction.

S.A. Sample	U.S.A. Comparison Group	Percentile Rank of SA Scores on USA norms
Accountants	Accountants (N = 53)	77
Engineers	Engineers (N = 387)	40
Nurses	Full-time Nurses (N = 419)	30
	Part-time Nurses (N = 293)	32
	Supervisor Nurses (N = 197)	25
Social Workers	Social Workers (N = 166)	32

the highest mean satisfaction of any professional sampled, while nurses had the lowest mean satisfaction (see Table 18).

The comparisons between the South African professional groups themselves revealed significant differences. The One-Way Analysis of Variance showed a significant overall difference [$F(13,1776) = 10.25$, $p<.0001$]. Differences isolated by the Bonferroni Means Test which were significant at the $p<.05$ level are reflected in Table 18. From this table it is clear that nurses had the lowest level of job satisfaction. Their mean of 70.87 represents an appraisal of their jobs that is less than satisfied (which would be a score of 80) but more positive than neutral (a score of 60). At the other end of the scale were accountants ($\bar{X} = 82.7$) and physiotherapists ($\bar{X} = 82.5$). Accountants had a marginally higher mean satisfaction than physiotherapists. Physiotherapists were nevertheless significantly more satisfied than nine professional groups while accountants were significantly more satisfied than only eight other groups. This is an excellent illustration of one of the quirks of the Bonferroni Means Test where cell sizes are unequal - there are 100 accountants in the sample as opposed to 133 physiotherapists.

The reasons for the differences in job satisfaction between groups relates to the different work and working conditions prevalent in the different professions. These will not be

TABLE 18: Comparisons between Professional Groups on the Variable General Job Satisfaction.*

Profession	Mean	Professions with Significantly less Job Satisfaction	Professions with Significantly greater Job Satisfaction
Acc	82.66	Rad,Eng,Doc,Vet, Diet,Soc,Phar,Nurs,	
Phys	82,50	Arc,Rad,Eng,Doc, Vet,Diet,Soc,Phar, Nurs	
Att	81,24	Eng,Vet,Soc,Phar, Nurs	
Psy	79.27	Soc,Phar,Nurs	
Dent	77.73	Nurs	
Arc	77.70	Nurs	Phys
Rad	76.88	Nurs	Acc,Phys
Eng	76.34	Nurs	Acc,Phys,Att
Doc	76.08	Nurs	Acc,Phys
Vet	76.06	Nurs	Acc,Phys,Att
Diet	75.70		Acc,Phys
Soc	74.41		Acc,Phys,Att, Psy
Phar	73.98		Acc,Phys,Att, Psy
Nurs	70.87		Acc,Phys,Att, Psy,Dent,Arc, Rad,Eng,Doc,Vet

* Please see overleaf for the key to the abbreviations.

TABLE 18 Continued

Key to abbreviations:

Acc - Accountants
Arc - Architects
Att - Attorneys
Dent - Dentists
Diet - Dieticians
Doc - Medical Doctors
Eng - Engineers
Nurs - Nurses
Phar - Pharmacists
Phys - Physiotherapists
Psy - Psychologists
Rad - Radiographers
Soc - Social Workers
Vet - Veterinarians

discussed at this stage, but will be discussed towards the end of this chapter where the professions are considered individually.

Intrinsic Job Satisfaction

Once again the One-Way Analysis of Variance revealed a significant overall difference [F (13,1776) = 6.51, p <.0001]. The Bonferroni Means Test isolated specific differences between groups and the significant differences are summarized in Table 19. Perhaps because of the relative restriction of the range of possible scores, differences between groups were not as extreme as they were for the general satisfaction scores. However, the ranking of professions was similar for both variables, with physiotherapists and accountants exhibiting high levels, and nurses and pharmacists exhibiting low levels of intrinsic job satisfaction.

Extrinsic Job Satisfaction

The result of the One-Way Analysis of Variance showed that a significant overall difference among professions existed on this variable [F (13.1776) = 11.17, p<.0001]. The Bonferroni Means Test found a great number of differences and these are reflected in Table 20. Again the rankings among professional groups did not appear to differ significantly from those on the

TABLE 19: Comparisons between Professional Groups on the Variable Intrinsic Job Satisfaction

Profession	Mean	Professions with Significantly less Intrinsic Job Satisfaction	Professions with Significantly greater Intrinsic Job Satisfaction
Phys	38.82	Soc,Arc,Det,Eng, Vet,Nurs,Phar	
Acc	38,06	Vet,Nurs,Phar	
Psy	37,97	Vet,Nurs,Phar	
Att	37,90	Phar	
Rad	37,50	Phar	
Doc	37.13		
Dent	37.12		
Soc	36.20		Phys
Arc	36.07		Phys
Diet	36.00		Phys
Eng	35.89		Phys
Vet	35.77		Phys,Acc,Psy
Nurs	35,59		Phys,Acc,Psy
Phar	34,92		Phys,Acc,Psy

TABLE 20: Comparisons between Professional Groups on the Variable Extrinsic Job Satisfaction

Profession	Mean	Professions with Significantly less Extrinsic Job Satisfaction	Professions with Significantly greater Extrinsic Job Satisfaction
Acc	31.31	Psy,Eng,Vet,Dent, Pharm,Rad,Diet, Doc,Soc,Nurs	
Phys	30,51	Eng,Vet,Dent,Phar, Rad,Diet,Doc,Soc, Nurs	
Att	29,99	Phar,Rad,Doc,Soc, Nurs	
Arc	28.92	Soc,Nurs	
Psy	28.21	Nurs	Acc
Eng	28.03	Nurs	Acc,Phys
Vet	27.63	Nurs	Acc,Phys
Dent	27.47		Acc,Phys
Phar	27.20		Acc,Phys,Att
Rad	27.11		Acc,Phys,Att
Diet	27.00		Acc,Phys
Doc	26.62		Acc,Phys,Att,Arc
Soc	26.23		Acc,Phys,Att,Arc
Nurs	24.85		Acc,Phys,Att,Arc Psy,Eng,Vet

other satisfaction variables already reported. (Note once again the effect of different cell sizes on the Bonferroni calculations - while pharmacists and radiographers both had higher means than dieticians, they were both significantly lower than the attorneys' scores while the dieticians' and attorneys' scores did not differ significantly!)

Autonomic Job Satisfaction

The Analysis of Variance showed a significant overall difference on this final satisfaction measure [F (13,1776) = 14.06, p.0001]. The Bonferroni Means Test was again used to isolate differences between groups, and the results of the analysis are reported in Table 21. As can be seen from the table, attorneys were the most satisfied with the amount of autonomy and independence their job allows, scoring a mean of 13.35 out of a possible 15.00. Once again nurses reported alarmingly low levels of satisfaction. In this case they scored significantly lower than all other professionals. The ranking of professionals on this variable is little changed from the ranking on other satisfaction variables, although attorneys, dieticians and dentists scored relatively higher on this variable while radiographers scored relatively lower.

TABLE 21: Comparisons between Professional Groups on the Variable Autonomic Job Satisfaction

Profession	Mean	Professions with Significantly less Autonomic Job Satisfaction	Professions with Significantly greater Autonomic Job Satisfaction
Att	13.35	Rad,Soc,Phar, Nurs	
Acc	13.29	Soc,Phar,Nurs	
Phys	13,17	Soc,Phar,Nurs	
Dent	13,14	Soc,Phar,Nurs	
Psy	13,09	Soc,Phar,Nurs	
Arc	12,71	Nurs	
Diet	12,70	Nurs	
Vet	12,66	Nurs	
Eng	12,42	Nurs	
Doc	12,32	Nurs	
Rad	12,28	Nurs	Att
Soc	11,98	Nurs	Att,Acc,Phys, Den,Psy
Phar	11,86	Nurs	Att,Acc,Phys, Dent,Psy
Nurs	10,42		Att,Acc,Phys, Dent,Psy,Arc, Diet,Vet,Eng,Doc Rad,Soc,Phar

Differences in Job Involvement

The relative level of job involvement of the professional groups was investigated using the same procedure employed in the analyses of differences in job satisfaction. These analyses showed that there were also significant differences between professions on this variable. The One-Way Analysis of Variance indicated a significant overall difference [F (13,1777) = 10.79, p<.0001], and the differences isolated by the Bonferroni Ranges Test are listed in Table 22.

South African professionals did not seem to report extremely high job involvement, the mean ranging from 57.77 to 43.55 out of a possible 90 (see Appendix E). The results of this analysis reinforced the theoretical position that job satisfaction and involvement are not causally related (Lawler & Hall, 1970; Porat, 1979; Rabinowitz & Hall, 1977). Architects for example scored relatively highly on job involvement but not on job satisfaction while the opposite held true for physiotherapists. They were high on job satisfaction yet low on job involvement. By and large it appears that the more creative and challenging the job the higher the job involvement it will elicit. Or at least that people seeking creative and challenging work tend to be more involved in their job - obviously the direction of causality cannot be inferred from from this analysis. Again, these differences will be discussed in greater depth when the professions are looked at individually

TABLE 22: Comparisons between South African Professional Groups on the Variable Job Involvement

Profession	Mean	Professions with Significantly Lower Job Involvement	Professions with Significantly greater Job Involvement
Arc	57.77	Eng,Dent,Soc,Phar, Phys,Diet,Rad	
Acc	56.60	Soc,Phar,Phys, Diet,Rad	
Att	55.88	Soc,Phar,Phys, Diet,Rad	
Vet	55.25	Soc,Phar,Phys, Diet,Rad	
Nurs	53.57	Phys,Diet,Rad	
Doc	53.06	Phys,Rad	
Psy	51.71	Rad	
Eng	51.22	Rad	Arc
Dent	50.28		Arc
Soc	48.23		Arc,Acc,Att,Vet
Phar	48.39		Arc,Acc,Att,Vet
Phys	46.08		Arc,Acc,Att, Vet,Nurs,Doc
Diet	45.73		Acc,Arc,Att, Vet,Nurs
Rad	43,55		Arc,Acc,Att,Vet, Nurs,Doc,Psy,Eng

later in this chapter.

Differences in Career Orientations

Schein (1985) and DeLong (1982a, 1982b) suggested that an individual's exclusive career orientation may be taken as the highest scoring orientation out of the nine measured by the Career Orientation Inventory. As argued in Chapter Eight, the Inventory effectively consists of nine independent scales, and in the absence of normative data the technique suggested by Schein and DeLong must be regarded with great scepticism as regards its accuracy. The analyses to be detailed in this section were proposed as a partial solution to this problem. The outcome of the comparisons of each orientation between professional groups will be to sketch a relative profile of the importance of each value for each profession. The resultant hierarchy of orientations may be similar to the technique used by Holland (1973, 1985) to identify vocational personalities. Ravlin and Meglino (1989) have demonstrated that work related value systems may function as a cognitive hierarchy, providing further evidence of the validity of an hierarchical approach.

Effectively the professional groups will provide their own normative data with all the other professions providing points of reference for each individual professional group. This is only a partial solution as the distributions of each career orientation in the universe of employed people remains unknown

and the professional as defined for the purpose of this thesis may be regarded as a special case. In any case the analyses as proposed are statistically sound and while they cannot give the clear-cut answers that DeLong and Schein's technique would provide, the results can at least be treated with a great deal more confidence.

In the section below comparisons are made between groups (following the same procedure used for comparisons of job satisfaction and job involvement) on each career orientation in turn.

Challenge/Competition

The One-Way Analysis of Variance showed a highly significant overall difference between the professions in their orientation towards Challenge/Competition [$F(13,1776) = 15.51$, $p<.0001$]. The Bonferroni Means Test isolated the differences and these results are reported in Table 23.

As can be seen from the table, challenge and competition was of particular importance to accountants, engineers and attorneys, while physiotherapists in particular had very low scores on this variable.

The emphasis in this factor analytically derived orientation (see the interpretation in Chapter Eight) is on competing and winning rather than on challenge. Consequently it was not surprising that the so-called "helping professions"

TABLE 23: Comparisons between Professional Groups in their Orientation towards Challenge/ Competition

Profession	Mean	Professions with Significantly lower Challenge/Competition Scores	Professions with Significantly higher Challenge /Competition Scores
Acc	29.14	Phar,Soc,Dent, Diet,Vet,Psy,Rad, Doc,Phys	
Eng	28.10	Phar,Soc,Dent, Diet,Vet,Psy,Rad, Doc,Phys	
Att	27.96	Soc,Dent,Dent,Vet, Psy,Rad,Doc,Phys	
Arc	27.13	Soc,Vet,Psy,Rad, Doc,Phys	
Nurs	26.21	Psy,Rad,Doc,Phys	
Phar	24.41	Phys	Acc,Eng,
Soc	23.70	Phys	Acc,Eng,Att,Arc
Dent	23.45	Phys	Acc,Eng,Att
Diet	23.28	Phys	Acc,Eng,Att
Vet	23.11	Phys	Acc,Eng,Att,Arc
Psy	22.20		Acc,Eng,Att, Arc,Nurs
Rad	22.14		Acc,Eng,Att, Arc,Nurs
Doc	21.72		Acc,Eng,Att, Arc,Nurs
Phys	18.61		Acc,Eng,Att,Arc, Nurs,Phar,Soc, Dent,Diet,Vet

have low scores on this variable as opposed to the more business oriented professions.

Accountancy and engineering are both professions practised within a business environment and thus within a context of competition both between people and between organisation. Similarly, some aspects of legal practice may be associated with intense competition for example in civil litigation.

Service/Dedication

Of all the Analyses of Variance reported in this chapter, this one yielded the highest F value indicating that the professions differed widely overall in their orientation towards service/dedication [F (13,1777) = 37.36, p<.0001]. The results of the Bonferroni Means Tests are reported in Table 24. There is little surprise in this table. Professions which one might expect to be most concerned with service to others and dedication to worthy causes (such as nursing and social work) did indeed score highly on this orientation. More technically oriented professions such as accounting and engineering by contrast have low scores on this orientation. Attorneys provided a possibly counter-intuitive finding. They exhibited a low orientation towards service/dedication where one might expect them to be more committed to social values and causes.

TABLE 24: Comparisons between Professional Groups in their Orientation towards Service/Dedication

Profession	Mean	Professions with Significantly lower Service/Dedication Scores	Professions with Significantly higher Service/ Dedication Scores
Nurs	46.13	Phys,Rad,Psy,Doc, Diet,Phar,Dent,Arc, Vet,Att,Acc,Eng	
Soc	43.89	Psy,Doc,Diet,Phar, Dent,Arc,Vet,Att, Acc,Eng	
Phys	42.46	Phar,Dent,Arc,Vet, Att,Nurs,Acc,Eng,	Nurs
Rad	42.06	Dent,Arc,Vet,Att, Acc,Eng	Nurs
Psy	40.31	Vet,Att,Acc,Eng	Nurs,Soc
Doc	39.29	Att,Acc,Eng	Nurs,Soc
Diet	39.09	Acc,Eng	Nurs,Soc
Phar	39.02	Att,Acc,Eng,	Nurs,Soc,Phys
Dent	37.35	Acc,Eng	Nurs,Soc,Phys, Rad
Arc	37.13	Acc,Eng	Nurs,Soc,Phys, Rad
Vet	36.38	Eng	Nurs,Soc,Phys, Rad,Psy
Att	35.27		Nurs,Soc,Phys, Rad,Psy,Doc,Phar
Acc	33.18		Nurs,Soc,Phys, Rad,Psy,Doc, Diet,Phar, Dent,Arc
Eng	32.14		Nurs,Soc,Phys, Rad,Psy,Doc, Diet,Phar,Dent, Arc,Vet

Autonomy/Independence

The One-Way Analysis of Variance indicated that a significant overall difference exists between the scores of the professional groups on this variable [F (13.1776) = 18.27, $p<.0001$]. The more specific results of the Bonferroni Means Test are reported in Table 25.

Some professions allow more scope for individuals to determine their own career role(s) than other professions, and these differences seem to be reflected to some degree by the mean scores of the various professions. Nurses, for example, arguably have a highly regimented role in terms of decision latitude and correspondingly had the lowest score of all the professions (along with social workers). Both nurses and social workers work closely with more authoritative figures such as medical doctors and psychiatrists, which may also limit their independence. By contrast, dentists (who score highly on this variable) tend to work in private practice and are responsible to no one but their patients.

It is also relevant that the professions scoring lower on this measure tend to be dominantly female, while higher scoring professions are dominantly male. It is thus possible that a component of this difference relates to the different socialisational experiences of men and women.

TABLE 25: Comparisons between Professional Groups in their Orientation towards Autonomy/ Independence

Profession	Mean	Professions with Significantly lower scores on the Autonomy /Independence Orientation	Professions with Significantly higher scores on the Autonomy/ Independence Orientation
Dent	37.35	Doc,Phar,Diet,Eng, Phys,Rad,Soc,Nurs	
Arc	36.62	Eng,Phys,Rad,Soc, Nurs	
Psy	36.09	Eng,Phys,Rad,Soc, Nurs	
Att	35.43	Rad,Soc,Nurs	
Vet	35.02	Rad,Soc,Nurs	
Acc	34.68	Rad,Soc,Nurs	
Doc	33.49	Rad,Soc,Nurs	Dent
Phar	33.33	Rad,Soc,Nurs	Dent
Diet	32.91	Soc,Nurs	Dent
Eng	32.50	Soc,Nurs	Dent,Arc,Psy
Phys	32.39	Soc,Nurs	Dent,Arc,Psy
Rad	29.62		Dent,Arc,Psy, Att,Vet,Acc, Doc,Phar
Soc	28.04		Dent,Arc,Psy, Att,Vet,Acc, Doc,Phar,Diet, Eng,Phys
Nurs	26.96		Dent,Arc,Psy, Att,Vet,Acc, Doc,Phar,Diet, Eng,Phys

Entrepreneurship

A significant overall difference was returned by the One-Way Analysis of Variance calculated for this variable [F (13,1777) = 31.3,p <.0001]. This relatively high F value indicated correspondingly extreme differences between the groups in their orientations towards creating and nurturing an enterprise of their own. The results of the Bonferroni Tests support this contention, revealing a large number of significant differences. (These results are represented in Table 26.)

Architects - who might be considered the definitive creators and builders - scored most highly just as one might have predicted. Accountants are ranked second and this is understandable if consideration is given to the business management role South African accountants tend to occupy or are expected to occupy in the age groups sampled. Lowest ranking professions were those which allow little or no opportunity for entrepreneurial activities or any sense of project ownership. These professions include radiographers, social workers and nurses.

Geographic Security

The One-Way Analysis of Variance indicated that a significant overall difference (albeit a small one) existed between professional groups on this variable [F (13,1777) =

TABLE 26: Comparisons Between Professional Groups in their Orientation towards Entrepreneurship

Profession	Mean	Professions with Significantly lower Entrepreneurial Orientations	Professions with Significantly greater Entrepreneurial Orientations
Arc	33.96	Dent,Vet,Diet,Psy, Phys,Doc,Nurs,Soc,Rad	
Acc	32.40	Vet,Diet,Psy,Phys, Doc,Nurs,Soc,Rad	
Eng	29.81	Psy,Phys,Doc,Nurs, Soc,Rad	
Att	29.78	Psy,Phys,Doc,Nurs, Soc,Rad	
Phar	29.66	Psy,Phys,Doc,Nurs, Soc,Rad	
Dent	28.67	Psy,Phys,Doc,Nurs, Arc,Soc,Rad	Arc
Vet	27.14	Phys,Doc,Nurs,Soc, Rad	Arc,Acc
Diet	25.16	Soc,Rad	Arc,Acc
Psy	22.51		Arc,Acc,Eng, Att,Phar,Dent
Phys	20.88		Arc,Acc,Eng,Att, Phar,Dent,Vet
Doc	20.34		Arc,Acc,Eng,Att, Phar,Dent,Vet
Nurs	19.52		Arc,Acc,Eng,Att, Phar,Dent,Vet
Soc	18.24		Arc,Acc,Eng,Att, Phar,Dent,Vet, Diet
Rad	17.60		Arc,Acc,Eng,Att, Phar,Dent,Vet, Diet

5.89,p <.0001]. The fact that these small differences are nevertheless significant is due to the large sample sizes achieved. The Bonferroni Means Tests results are represented in Table 27.

It is questionable whether these differences represented legitimate differences in the orientations of the professional groups rather than differences between the sexes. The four highest ranking professional groups on this orientation - radiographers, physiotherapists, social workers and dieticians - are predominantly female while the lowest two - engineers and accountants - are predominantly male. To test this contention, F tests were performed between male and female pharmacists, medical doctors, veterinarians, psychologists and social workers. (These were the samples in which the numbers of male and female members both exceeded 24.)

Only the F test involving pharmacists proved significant reaching the p<.01 level. As the pharmacist group was the only sample where the sexes were fairly evenly distributed, with 67 males and 72 females, the other F test results may have been prejudiced by the smaller and uneven cell sizes entering the calculation. On the whole these results may be seen as partial support for the contention that remaining in a specific geographical area is more important to females than to males.

TABLE 27: Comparisons Between Professional Groups in their Orientation towards Geographic Security

Profession	Mean	Professions with Significantly lower scores on the Geographic Security Orientation	Professions with Significantly higher scores on the Geographic Security Orientation
Rad	34.31	Vet,Arc,Eng	
Phys	33.70	Arc,Eng	
Soc	32.09	Arc,Eng	
Diet	31.83	Eng	
Acc	30.98	Eng	
Att	30.91	Eng	
Dent	29.71		
Phar	29.61	Eng	
Psy	28.70		
Doc	28.68		
Vet	28.58		Rad
Nurs	28.31		
Arc	26.29		Rad,Phys,Soc
Eng	23.94		Rad,Phys,Soc, Diet,Acc,Att, Phar

Even given a possible sex difference, however, the engineers do seem to be a group apart. Although engineering remains a predominantly male profession the engineers nevertheless score significantly lower on this variable than do two other male dominated professional groups, namely accountants and attorneys. More than any other group sampled, engineers appeared to be prepared to go wherever their job dictates.

Job Security

This One-Way Analysis of Variance yielded a relatively high F value, [F (13,1777) = 31.14, $p<.0001$]. The Bonferroni ranges test isolated a correspondingly large number of differences and these are reported in Table 28.

Superficially these differences also seem to reflect a sex difference, with predominantly female groups ranking higher than predominantly male groups. This possibility was investigated following the procedure as for the Geographic Security variable. The results of these analyses were, however, in the opposite direction to those for the Geographic Security orientation. In this case the only significant result was for the psychologists ($p<.0001$), but it was the males who scored more highly. Interestingly, the sex differences in the Geographic Security and Job Security orientations seem to reflect traditional sex role stereotypes. The male, traditionally the "breadwinner" appears more concerned with job security, while

TABLE 28: Comparisons Between Professional Groups in their Orientation towards Job Security

Profession	Mean	Professions with Significantly lower scores on the Job Security Orientation	Professions with Significantly higher scores on the Job Security Orientation
Nurs	43.88	Soc,Rad,Phar,Psy, Diet,Phys,Doc,Dent, Eng,Vet,Acc,Att, Arc	
Soc	38.42	Phar,Psy,Diet,Phys, Doc,Dent,Eng,Vet, Acc,Att,Arc	Nurs
Rad	38.25	Phar,Psy,Diet,Phys, Doc,Dent,Eng,Vet, Acc,Att,Arc	Nurs
Phar	32.07	Vet,Att,Arc,	Nurs,Soc,Rad
Psy	31.77	Att,Arc	Nurs,Soc,Rad
Diet	30.88	Arc	Nurs,Soc,Rad
Phys	30.87	Att,Arc	Nurs,Soc,Rad
Doc	28.32	✓	Nurs,Soc,Rad
Dent	28.05		Nurs,Soc,Rad
Eng	27.77		Nurs,Soc,Rad
Vet	27.63		Nurs,Soc,Rad, Phar
Acc	27.05		Nurs,Soc,Rad
Att	25.52		Nurs,Soc,Rad, Phar,Psy,Phys
Arc	24.07		Nurs,Soc,Rad, Phar,Psy,Diet, Phys

the female, traditionally responsible for the maintenance of home and social life appears more concerned with geographic security.

Overall though, the results in Table 28 must be seen to represent predominantly the differences in the orientations characteristic of the various professions rather than any sex difference. Once again the results are as might be expected. Those professionals with relatively lowly valued skills (in terms of scarcity and financial remuneration) were most concerned with job security. For nurses in particular, job security may be one of the few positive conditions of employment their job offers. At the other end of the scale, professionals who are in more demand and highly paid need scarcely consider security to be a prime motivator. For these professionals (in an age group where their careers are established but have not yet peaked) job security must be considered inalienable.

Architects, of course, may be a case apart. With their livelihood so dependent on the economic ups and downs, they may well have to feel that job security is inconsequential even to consider remaining in the profession! During the period in which the survey was conducted, however (1987/88), the country was in a period of economic growth, and architects as a whole need not have had immediate concerns about job security.

Technical/Functional Competence

The One-Way Analysis of Variance indicated a significant difference between the professional groups in their scores on this variable [F (13,1775) = 14.11, p<.0001]. The results of the Bonferroni Means Test are represented in Table 29.

The most striking feature of this analysis was the extremely low scores of engineers on this variable. This counter-intuitive finding will be elaborated upon later. The scores of the remaining professional groups are relatively homogenous, and this is due no doubt to the stringent technical capabilities demanded by all the professions.

Managerial Competence

The One-Way Analysis of Variance once again showed an overall difference between professions in their scores on this variable [F (13,1776) = 23.89, P<.0001]. Table 30 reflects the results of the Bonferroni Ranges test.

Most professionals surveyed would obviously not be involved in leading and integrating the efforts of others or controlling organizations and their constituent people and resources. Correspondingly, professionals such as physiotherapists, medical doctors and veterinarians did not consider the Managerial Competence orientation personally important. On the other hand,

TABLE 29: Comparisons between Professional Groups in their Orientation towards Technical/Functional Competence

Profession	Mean	Professions with Significantly lower scores on the Technical/Functional Competence Orientation	Professions with Significantly higher scores on the Technical/ Functional Competence Orientation
Phys	32.79	Dent,Phar,Acc,Eng	
Psy	32.63	Phar,Acc,Eng	
Doc	31.30	Acc,Eng	
Nurs	30.60	Eng	
Arc	29.94	Eng	
Vet	29.47	Eng	
Soc	29.35	Eng	
Rad	29.00	Eng	
Att	28.19	Eng	
Dent	27.74	Eng	Phys
Diet	27.66	Eng	
Phar	27.10	Eng	Phys,Psy
Acc	25.64	Eng	Phys,Psy,Doc
Eng	20.19		Phys,Psy,Doc, Nurs,Acc,Vet, Soc,Rad,Att, Dent,Diet,Phar, Acc

TABLE 30: Comparisons between Professional Groups in their Orientation towards Managerial Competence

Profession	Mean	Professions with Significantly lower scores on the Managerial Competence Orientation	Professions with Significantly higher scores on the Managerial Competence Orientation
Eng	37.08	Phar,Att,Dent,Psy, Rad,Vet,Doc,Phys	
Nurs	36.57	Phar,Att,Dent,Psy, Rad,Vet,Doc,Phys	
Arc	35.23	Att,Dent,Psy,Rad, Vet,Doc,Phys	
Acc	35.13	Dent,Psy,Rad,Vet, Doc,Phys	
Soc	33.54	Rad,Vet,Doc,Phys	
Diet	32.49	Vet,Doc,Phys	
Phar	32.32	Vet,Doc,Phys	Eng
Att	30.87	Doc,Phys	Eng,Nurs,Arc
Dent	30.04	Phys	Eng,Nurs,Arc,Acc
Psy	29.57	Phys	Eng,Nurs,Arc, Acc,Soc
Rad	29.51	Phys	Eng,Nurs,Arc, Acc,Soc
Vet	27.05		Eng,Nurs,Arc,Acc, Soc,Diet,Phar
Doc	26.02		Eng,Nurs,Arc, Acc,Soc,Diet, Phar,Att
Phys	24.48		Eng,Nurs,Arc, Acc,Soc,Diet, Phar,Att,Dent, Psy,Rad

the more business oriented professions do value this orientation highly and so do nurses.

The extremely high Managerial Competence orientation of engineers stands in contrast to their extremely low orientation towards Technical/Functional Competence. The contrast is partly a function of the idiosyncratic measurement of the Technical/Functional Competence factor (discussed in Chapter Eight).

The idiosyncrasy is that concern for Technical/Functional competence is not measured in its own right, but rather as an alternative of the Managerial Competence criterion of a promotion. Given the strong managerial ambitions of engineers (as evidenced in Table 30) their scores on the Technical/Functional competence orientation must be depressed. It is not only a South African phenomenon that engineers aspire to manage rather than work as engineers. For example, studies by Rynes (1987), Rynes, Tolbert and Strausser (1988), and Sedge (1985) provide similar evidence. It has been suggested that the aspiration to manage identified among many engineers may be caused by organisational reward structures that favour managerial over technical careers (Bailyn, 1980; Zaleznik, Dalton, Barnes & Lanrin, 1970).

Nurses also reflected a strong orientation towards Managerial Competence, possibly for reasons similar to those suggested for engineers. The nursing profession is of course organised into a fairly rigid and highly visible hierarchy

(ranks are reflected in insignia on uniforms) from nursing students to nursing sisters to matrons, zone matrons and so on. These posts are associated with increased status, improved remuneration and, of particular significance, with greater managerial (of patients and lower ranked nurses) and administrative workloads. Given then the greater benefits and responsibility of more senior nurses, the managerial orientation may also be cultivated in the nursing profession. Scorpio (1989) suggested that the increasing managerial and administrative workload of nurses is detrimental both to nursing services, and the satisfaction of nurses who value their more traditional roles.

The rationale behind this suggestion is similar to the conflict Rynes, Tolbert and Strausser (1988) and Zaleznik, Dalton, Barnes, and Lanrin (1970) believe is experienced by engineers. According to these authors, engineers are pressured into managerial roles where status and rewards are greater. However, the transition may not provide an optimal fit with individuals' talents and interests, and consequently both the job satisfaction and job performance of engineers-turned-managers (or indeed nurses - turned administrators) may suffer.

Lifestyle Integration

This One-Way Analysis of Variance yielded the lowest F value of all the analyses described in this Chapter [F (13,1777)

= 4.53, p<.0001]. This indicates that although there was an overall difference between groups it was a small one. This conclusion is echoed by the results of the Bonferroni ranges test showing very few significant differences between groups. These results are reported in Table 31. It is interesting to speculate on the implications of these results, but it should be emphasised that the low reliability of the factor demands caution in accepting the interpretation.

It appears that a balanced lifestyle was important to members of all the professions sampled. Even the lowest professional group mean on this variable (that of accountants) represented a score of 7.74 on a ten point scale of importance. In addition to the theoretical and psychometric criticisms levelled against this scale in previous chapters it appears that it furthermore lacks criterion validity in terms of discriminating between professional groups.

The results of this final Analysis of Variance lend themselves to two intriguing conclusions. Firstly, if we follow DeLong's (1982a, 1982b) and Schein's (1985) technique of identifying individual's career orientations from their highest score on the scales of this Career Orientation Inventory, then Lifestyle Integration is without doubt the predominant career orientation among members of all the professions sampled except nursing (where Service/Dedication predominates) and social work (also Service/Dedication). Since there is a limit to the number of career decisions that involve the balance between work and

TABLE 31: Comparisons between Professional Groups in their Orientation towards Lifestyle Integration

Profession	Mean	Professions with significantly lower Lifestyle Integration Orientation	Professions with significantly higher Lifestyle Integration Orientation
Rad	43.80	Psy,Soc,Eng,Acc	
Phys	42.88	Eng,Acc	
Nurs	42.30	Acc	
Doc	42.19	Acc	
Arc	41.23		
Diet	41.20		
Att	41.15		
Vet	41.01		
Dent	41.01		
Phar	40.92		
Psy	40.36		Rad
Soc	40.10		Rad
Eng	39.56		Rad,Phys
Acc	38.70		Rad,Phys,Nurs, Doc

36,72

Rad → Eng

other life interests, the career orientation theory becomes self-limiting. That is, because of its exclusive focus on one orientation it cannot provide explanations for other decisions that may be unrelated to an integrated lifestyle. A simple example may be a decision to transfer departments which may be due to a desire for novelty and challenge. By narrowly focusing on a primary decision making criterium the nuances of less individually powerful but cumulatively important criteria are lost.

Once again, this analysis provides support for an hierarchical model or profile of values or orientations such as used by Holland (1985) in identifying vocational types. Similar profiles of career orientations for each professional group will consequently be constructed in the latter half of this chapter. Hierarchical value models were also advocated by Ravlin and Meglino (1989).

The second conclusion refers to the high self-reported importance of a balanced lifestyle and the relatively low self reported job involvement. The mean response for each item in the Lifestyle Integration scale over all the professions was 8.23 out of 10. This meant that a balance between one's work and family life (see the interpretation of this factor in Chapter Seven) was rated as extremely important. By contrast, the mean response under the same format for the job involvement items was merely 5.72, indicating at most moderate involvement. Given these results the conclusion that suggests itself is that

high job involvement and high family involvement may be fundamentally incompatible. It appears in other words that the desire not to let either family or job concerns override each other may result in a relatively weak concern for each area rather than the ideal balance of high concern for both! Support for this contention may be found in the literature. Bailyn and Schein (1976) reached a similar conclusion while Burke, Weir and DuWors (1980) found that husband's reporting greater occupational demands (obviously not analogous to job involvement but a similar construct) had less marital and life satisfaction and decreased social participation.

Synopsis of Results for Each Profession

The analyses presented in this chapter make primary contributions to the study in two complementary ways. Firstly, the analyses demonstrate the ability of the different scales to discriminate between professional groups. This adds to the accumulating evidence of the criterion validity of the scales. (The analyses using the Lifestyle Integration orientation and Geographic Security orientation scales are the only exceptions to this.) Secondly, the analyses presented in this chapter provide intriguing insights into the career orientations of South African professionals and into the affective work outcomes they experience. The complementary (even circular) nature of these two contributions is derived from the fact that the

differences isolated by the instruments (the second contribution) give credence to the validity of the instruments (the first outcome) and vice versa!

Taken individually the results of the analyses reported in this chapter are a little overwhelming. Consequently, in an attempt to integrate the findings and to provide perspective for subsequent analyses, a synopsis of the results for each profession will be presented. This information will be presented in a graphic format from which it will be clear at a glance what the highlighted profession's relative standing is in each of the variables under study. The construction of the figures (Figure 10 to Figure 23) is fairly complicated although their interpretation is relatively straightforward.

Each horizontal line in the figure is derived from one of the tables reporting the results of the Bonferroni Ranges Tests. So for example the first line in each figure (the JSat line) is derived from Table 18. The numbers on that line represent each profession ranked from highest to lowest on that variable. The first number then (8) represents accountants, who had the highest actual score on the variable general job satisfaction. The number itself is equal to the number of professional groups with <u>significantly</u> lower general job satisfaction less the number of professional groups with <u>significantly</u> higher general job satisfaction. The next professional group (physiotherapists) then had nine professional groups with significantly lower job

satisfaction and none with greater, so the second number is nine and so on.

The profile is plotted through the midpoint of tied figures, or where their order are inverted due to different cell sizes. The first two figures on the JSat line in the figures (10 to 23) are inverted in this way, because accountants have a higher mean on this variable than physiotherapists do but are significantly higher than less professions than physiotherapists.

Thus the final profile represents the highlighted profession's relative standing on each of the variables under study. Effectively a picture of each profession's hierarchy of values is obtained based on normative data supplied by every other profession. This method and the results demonstrated in Figure 10, for example, should be contrasted with the paucity of data and possibly meaningless data that would be generated if one used DeLong's (1982a, 1982b) and Schein's (1985) technique of identifying career orientations from the raw scores on the Career Orienations Inventory. Following Schein and DeLong, one would conclude that Lifestyle Integration is THE career orientation of accountants as a whole (as with eleven other professional groups) followed by similar scores on the Managerial Competence, Autonomy/Independence and Service/ Dedication orientations. The Challenge/Competition and Entrepreneurial orientations which are highly important to

accountants relative to other professions in Figure 10 would not feature.

In the remainder of this chapter the profiles that have been discussed will be constructed for each profession and interpretations of the profiles will be made.

Accountants

The synopsis of results thus far for accountants are summarised in Figure 10. It is clear from this figure that the sample of accountants were very satisfied with their jobs, particularly with the extrinsic or contextual aspects of their jobs. These include factors such as pay and working conditions. Accountants also experienced a high degree of job involvement.

Turning to their career orientation profile, accountants scored extremely highly on the Challenge/Competition and Entrepreneurship orientations while Managerial Competence is also rated as important. At the opposite extreme, accountants, relative to other professional groups, placed a very low value on Lifestyle Integration, Service/Dedication and on Technical/Functional competence.

Accountants had what might be regarded as an ideal business profile, for which they were highly rewarded. Their strongly differentiated value profile, and their satisfaction with and involvement in their work may reflect the apparent strength of the intense formal and informal socialisation experiences of

Figure 10 A Profile of the Relative Position of ACCOUNTANTS on the Variables under Study

JOB SATISFACTION AND JOB INVOLVEMENT

JSat	8	9	5	3	1	0	-1	-2	-1	-2	-2	-4	-4	-10
IntJSat	7	3	3	1	1	0	0	-1	-1	-1	-1	-3	-3	-5
ExtJSat	10	9	5	2	0	-1	-1	-2	-3	-3	-2	-4	-4	-7
AutJSat	4	3	3	3	3	1	1	1	1	1	0	-4	-4	-13
JInv	7	5	5	5	3	2	1	0	-1	-4	-4	-6	-5	-8

CAREER ORIENTATIONS

CC	9	9	8	6	4	-1	-3	-2	-2	-3	-5	-5	-5	-10
SD	12	10	6	5	2	1	0	0	-2	-2	-4	-7	-10	-11
AI	8	5	5	3	3	3	2	2	1	-1	-1	-8	-11	-11
ENT	9	9	6	6	6	5	3	0	-6	-7	-7	-7	-8	-8
GSec	3	2	2	1	1	1	0	1	0	0	-1	0	-3	-7
JSec	13	10	10	0	-1	-2	-1	-3	-3	-3	-4	-3	-6	-7
TF	4	3	2	1	1	1	1	1	1	0	1	-1	-2	-13
MNG	8	8	7	6	4	3	1	-1	-3	-3	-4	-7	-8	-11
LS	4	2	1	1	0	0	0	0	0	0	-1	-1	-2	-4

KEY:

JSat	=	General Job Satisfaction
IntJSat	=	Intrinsic Job Satisfaction
ExtJSat	=	Extrinsic Job Satisfaction
AutJSat	=	Automatic Job Satisfaction
JInv	=	Job Involvement
CC	=	Challenge/Competition Orientation
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JSec	=	Job Security Orientation
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LS	=	Lifestyle Integration Orientation

accountants during their training and early career stages (Adler, Aranya & Amernic, 1981).

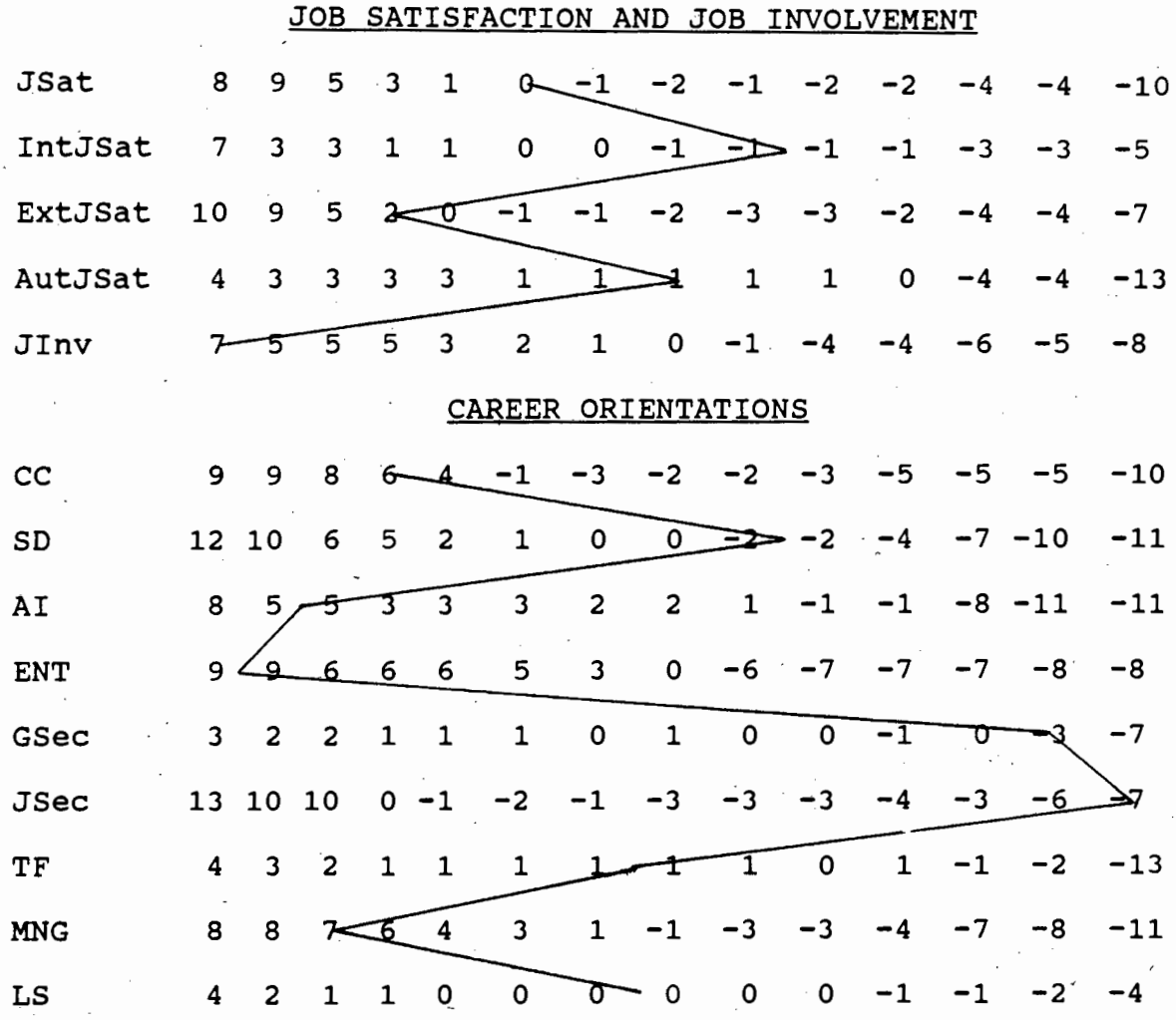
The accent on Challenge/Competition and Entrepreneurship reported in Figure 10 may be somewhat at odds with the traditional "shiny-pants, green-eyes and number-cruncher image" (Benton, 1984, p. 1) of accountants. However, as Bedeian, Mossholder, Touliatos and Barkman (1988) conclude, that stereotype is almost certainly overdrawn and vocational counsellors should consider the changing nature of the profession and the people it attracts.

Van Vuuren, Fouche and Verwey (1989) returned a similar finding. Although they used an older version of the Career Orientation Inventory (Schein, 1982) and the original scales thereof, they found that their sample of accountants tended to be orientated towards Managerial Competence and Entrepreneurship. Thus although their measuring instruments were different from the factor analytically derived scales employed in the present study, their conclusions were in accordance with the present results.

Architects

Architects emerged in Figure 11 as average to slightly better than average in their job satisfaction, and extremely highly involved in their work. Architects exhibited an unusual dichotomy between their satisfaction with intrinsic and

Figure 11. A Profile of the Relative Position of ARCHITECTS on the Variables under Study



KEY:

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IntJSat	=	Intrinsic Job Satisfaction
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JSec	=	Job Security Orientation
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MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

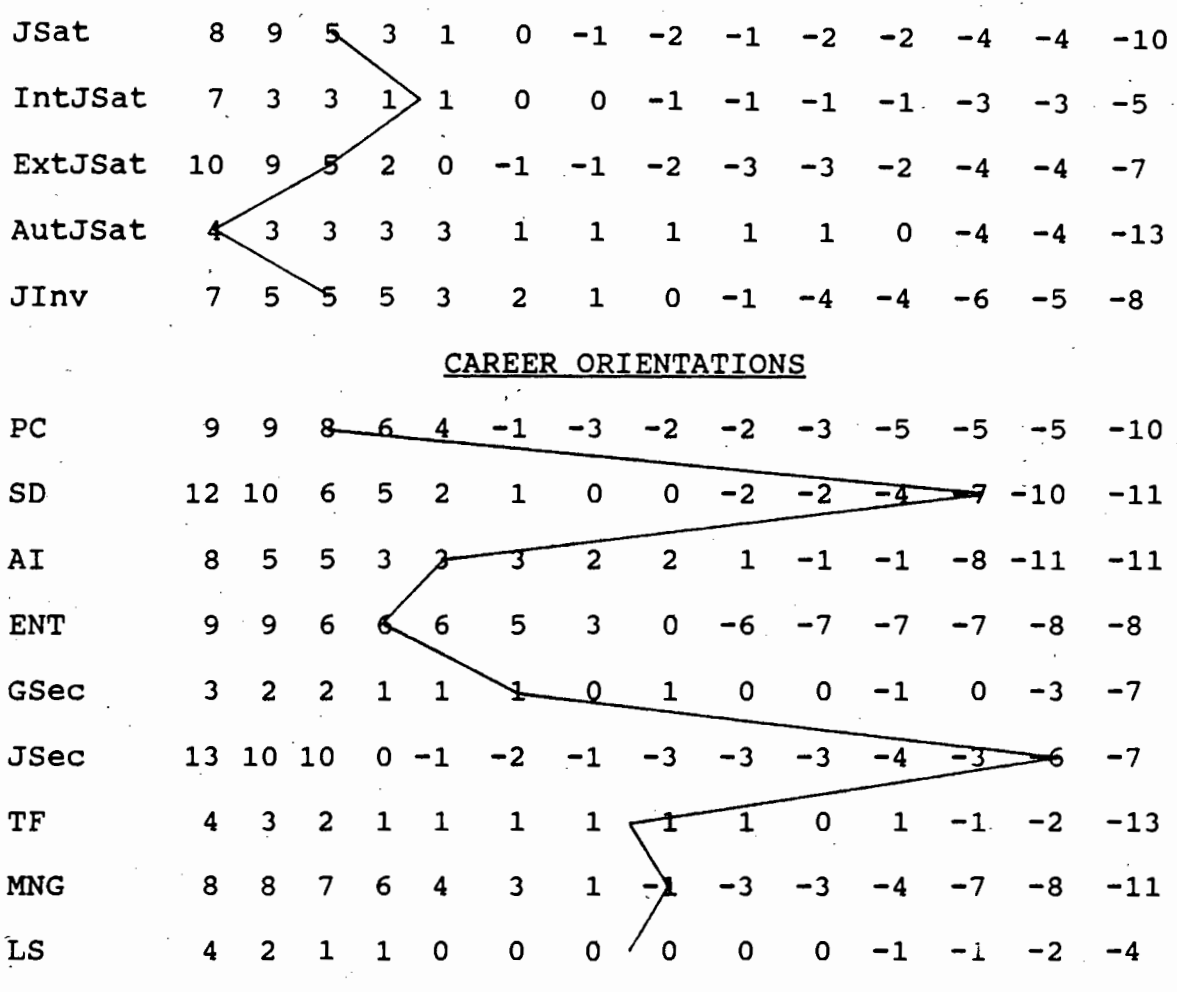
extrinsic facets of their work. Of the remaining professions, only radiographers and veterinarians had similarly diffuse scores. This result is contrary to the "emotional spillover" effect suggested by Locke (1983) and discussed earlier. However, over all fourteen professions the analyses tended to support Locke's (1983) hypothesis.

With regard to their career orientations, architects were high on Entrepreneurship, Autonomy/Independence, Managerial Competence and Challenge/Competition, and extremely low on the two security based orientations. If accountants may be considered to have an ideal business profile, architects must be archetypal entrepreneurs. They valued initiating and building an enterprise, enjoyed autonomy and were comfortable with the Managerial and Competitive/Challenging aspects of entrepreneurial activities. Furthermore, McClelland (1953, 1961) associated the achievement motive with entrepreneurial activity. He has also shown that high achievers are moderate risk takers. That architects were able to take risks may be extrapolated from the low value they attach to the Geographic and Job Security orientations.

Attorneys

Attorneys emerged in Figure 12 as highly job involved and satisfied. They were particularly satisfied with the amount of autonomy their job afforded them.

Figure 12: A Profile of the Relative Position of ATTORNEYS on the Variables under Study



KEY:

JSat	=	General Job Satisfaction
IntJSat	=	Intrinsic Job Satisfaction
ExtJSat	=	Extrinsic Job Satisfaction
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TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

Their career orientations emphasised Challenge/Competition and to a lesser extent Entrepreneurship, Autonomy/Independence and Geographic Security. At the other extreme they had little concern for job security and, surprisingly placed little value on service or dedication to causes. From the profile the average attorney's interests emerged as self-centered and self-serving - competitive, entrepreneurial and independent with low concern for social values and causes.

Dentists

Dentists appeared to have average to high job satisfaction and slightly below average job involvement (Figure 13). Similarly, on their career orientation profile they tend to exhibit average concern for most orientations. Their only extreme score was the strength of their orientation towards Autonomy/Independence. This was their predominant concern and they emerged as the only professional group with a profile as DeLong (1982a, 1982b) and Schein (1978, 1985) might have predicted. That is they had one dominant orientation rather than a hierarchy of orientations. An hierarchy of orientations appeared to be the normative profile for the other professional groups sampled.

Figure 13 A Profile of the Relative Position of DENTISTS on the Variables under Study

JOB SATISFACTION AND JOB INVOLVEMENT

JSat	8	9	5	3	1	0	-1	-2	-1	-2	-2	-4	-4	-10
IntJSat	7	3	3	1	1	0	0	-1	-1	-1	-1	-3	-3	-5
ExtJSat	10	9	5	2	0	-1	-1	-2	-3	-3	-2	-4	-4	-7
AutJSat	4	3	3	3	3	1	1	1	1	1	0	-4	-4	-13
JInv	7	5	5	5	3	2	1	0	-1	-4	-4	-6	-5	-8

CAREER ORIENTATIONS

PC	9	9	8	6	4	-1	-3	-2	-2	-3	-5	-5	-5	-10
SD	12	10	6	5	2	1	0	0	-2	-2	-4	-7	-10	-11
AI	8	5	5	3	3	3	2	2	1	-1	-1	-8	-11	-11
ENT	9	9	6	6	6	5	3	0	-6	-7	-7	-7	-8	-8
GSec	3	2	2	1	1	1	0	1	0	0	-1	0	-3	-7
JSec	13	10	10	0	-1	-2	-1	-3	-3	-3	-4	-3	-6	-7
TF	4	3	2	1	1	1	1	1	1	0	1	-1	-2	-13
MNG	8	8	7	6	4	3	1	-1	-3	-3	-4	-7	-8	-11
LS	4	2	1	1	0	0	0	0	0	0	-1	-1	-2	-4

KEY:

JSat	=	General Job Satisfaction
IntJSat	=	Intrinsic Job Satisfaction
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GSec	=	Geographic Security Orientation
JSec	=	Job Security Orientation
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

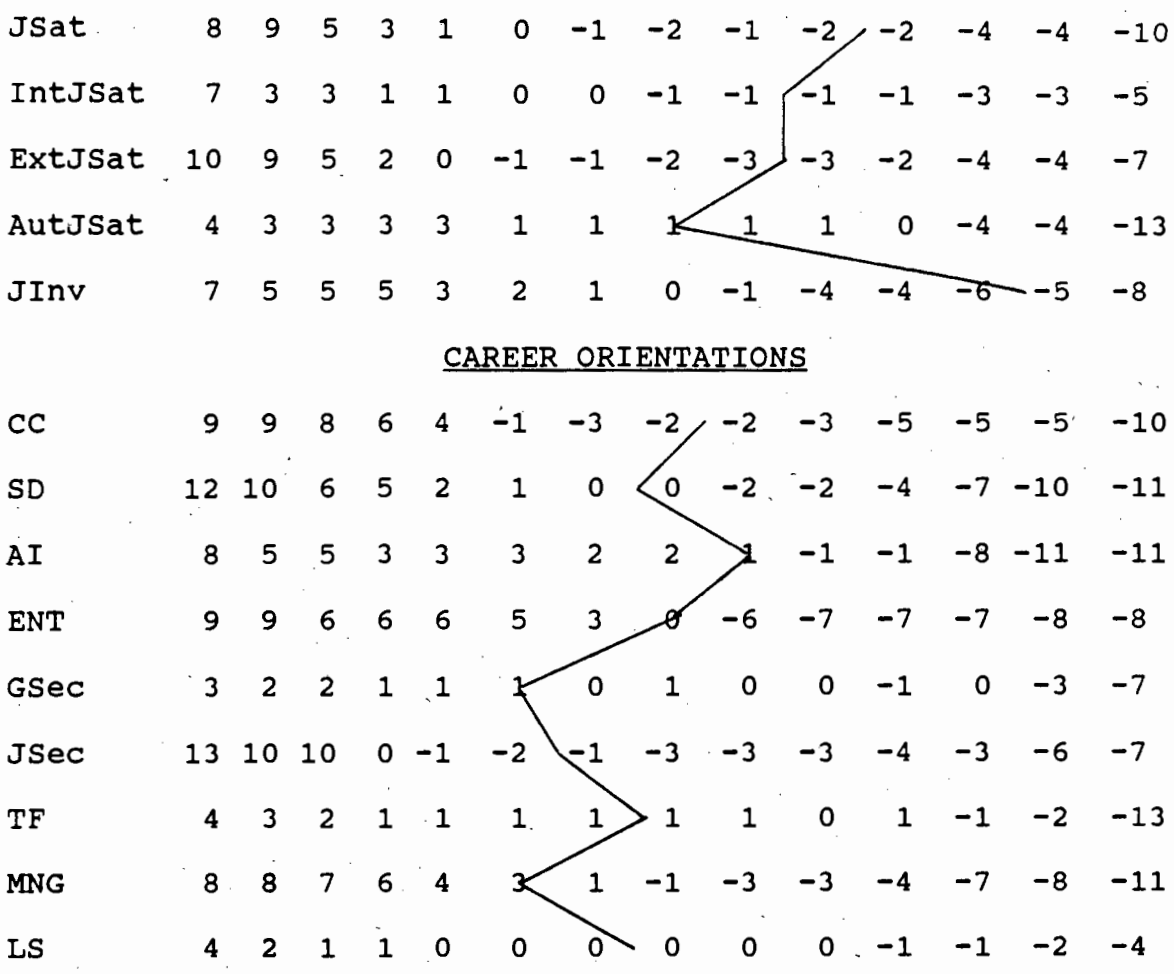
Dieticians

Dieticians exhibited average to low job satisfaction and low job involvement (Figure 14). No clear pattern emerged among their scores on the career orientation scales, all of which were scattered around the mean of the total sample of professionals. As a relatively new profession, dieticians may still be in the process of developing a clear identity. This may be indicated by the profile in Figure 14. Supporting that contention is the relatively low reported job involvement of dieticians, as job involvement has been related to professionalism (Morrow, 1988).

Medical Doctors

Medical doctors appeared to have marginally above average involvement and to derive average satisfaction from their jobs overall (Figure 15). However, they were not as satisfied with the extrinsic facets of their job. Medical doctors are fairly well paid relative to other professionals so it is likely that other job facets are responsible for their low extrinsic satisfaction. In particular, it was suggested in Chapter Five that they work long hours and suffer constant interruption at work and at home ("General Practitioners", 1989). This suggestion appears to be borne out by the low level of extrinsic satisfaction reflected in Figure 15.

Figure 14 A Profile of the Relative Position of DIETICIANS on the Variables under Study



KEY:

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ExtJSat	=	Extrinsic Job Satisfaction
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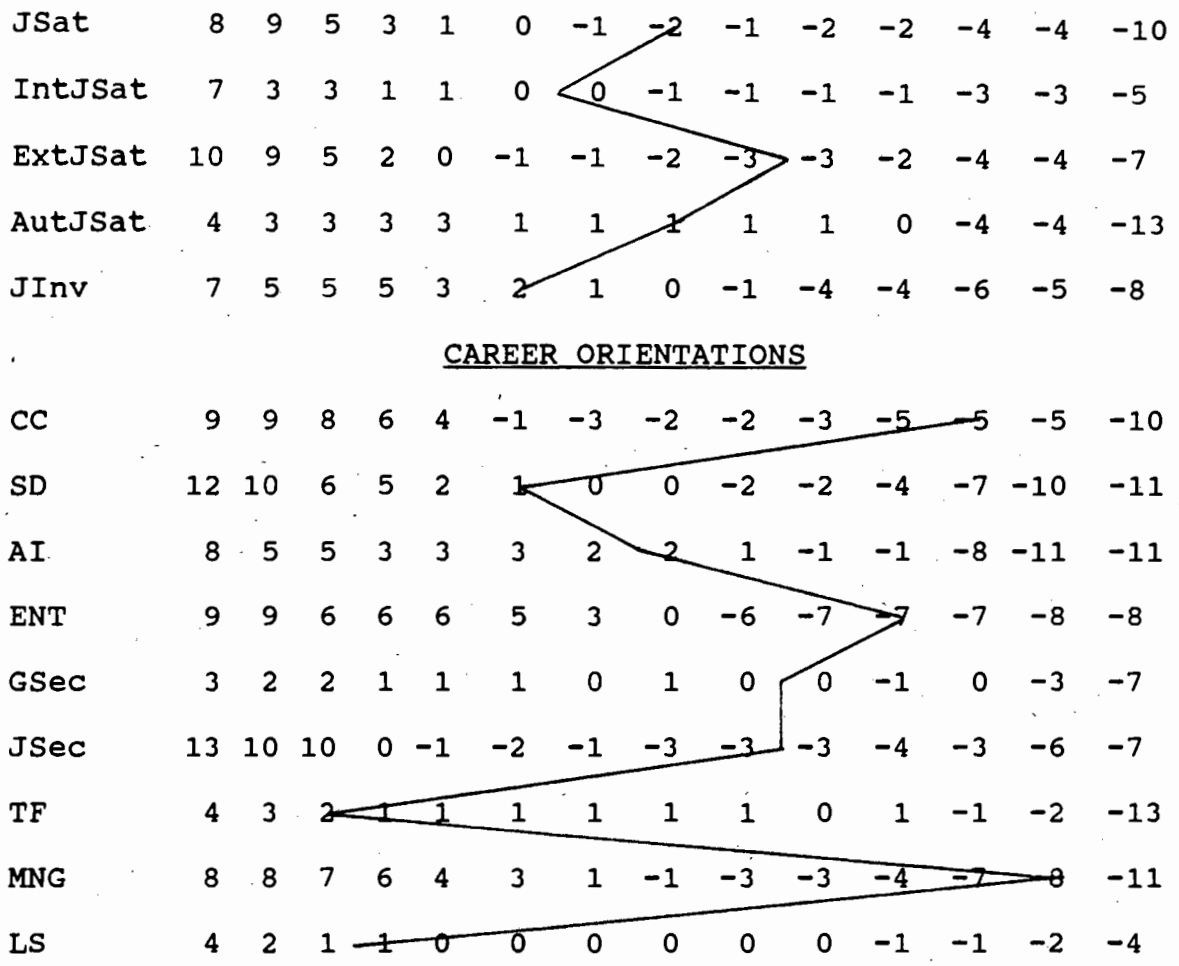
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

Figure 15 A Profile of the Relative Position of MEDICAL DOCTORS on the Variables under Study



KEY:

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IntJSat	=	Intrinsic Job Satisfaction
ExtJSat	=	Extrinsic Job Satisfaction
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AI	=	Autonomy/Independence Orientation
ENT	=	Entrepreneurship Orientation
GSec	=	Geographic Security Orientation
JSec	=	Job Security Orientation
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

With regard to their career orientations, medical doctors put great value on their technical competence and considered a balanced life style to be very important. On the other hand, managerial and competitive/challenge values held little appeal to them. Medical doctors' concern for a balanced life style may be a reaction to the extreme demands their work places on them. The concern may also result from the greater awareness they should have of the health implications of a balanced lifestyle. The image that emerges may be one of a work-hard, play-hard orientation to life and work.

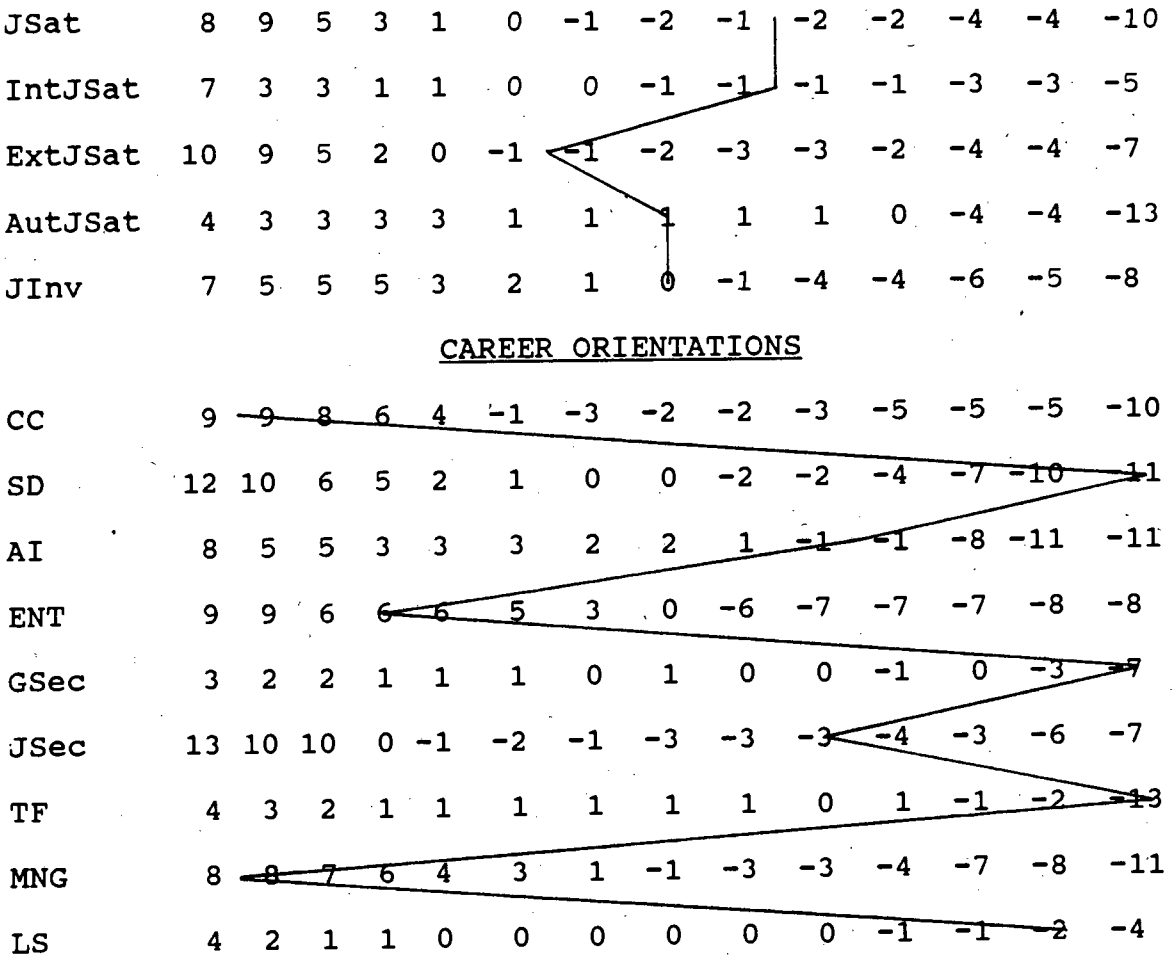
Engineers

Engineers scored slightly lower than average on both the job satisfaction and involvement measures (Figure 16). Their job satisfaction scores were mainly lowered by their relatively low satisfaction with the intrinsic aspects of their job.

Their career anchor profile was one of extremes. They scored extremely highly on the Challenge/Competition and Managerial Competence factors and highly on Entrepreneurship. At the other extreme they had the lowest scores of all the professions sampled on the Service/Dedication, Geographic Security and Technical/Functional Competence factors and had a very low concern for Lifestyle Integration.

Their profile may represent a stereotype of the corporate climber. The high values placed on competing and winning, on successfully managing human, material and financial resources,

Figure 16 A Profile of the Relative Position of ENGINEERS on the Variables under Study



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ENT	=	Entrepreneurship Orientation
GSec	=	Geographic Security Orientation
JSec	=	Job Security Orientation
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence
LS	=	Lifestyle Integration

and on initiating and building an enterprise are all congruent with the corporate climber image. In the light of this strong focus on performing in a corporate environment it is not surprising that the values placed on specific skills, on staying in particular areas, on serving others and on maintaining a balanced lifestyle, took a back seat!

The findings reported in Figure 16 echo the conclusions of Rynes (1987), Rynes, Tolbert and Strausser (1988), and Sedge (1985) that engineers aspire to manage rather than work as engineers. It represents a challenge to managers if they are to employ engineers in technical capacities and simultaneously provide salient reward structures. The key to solving this problem may be discovered in the high value engineers place on challenge and their contrastingly low intrinsic satisfaction.

In Chapter Five it was reported that Challenge is strongly related to intrinsic job satisfaction (Hall & Lawler, 1970; Savery, 1989a; Walsh, Taber & Beehr, 1980). However, it was also argued that individual values moderate the importance of particular job facets to overall satisfaction (e.g. Kopelman, 1979; Locke, 1969, 1983; Mitchell, 1974, 1982; Mitchell & Allbright, 1972; Mobley & Locke, 1970; Wanous & Lawler, 1972). Finally, it was argued that satisfaction was related to the <u>discrepancy</u> between what was desired from a job and the degree to which that desire was met (Locke, 1983; Rice, McFarlin & Bennett, 1989). In this light the exceptionally high value engineers place on challenge may make even moderately

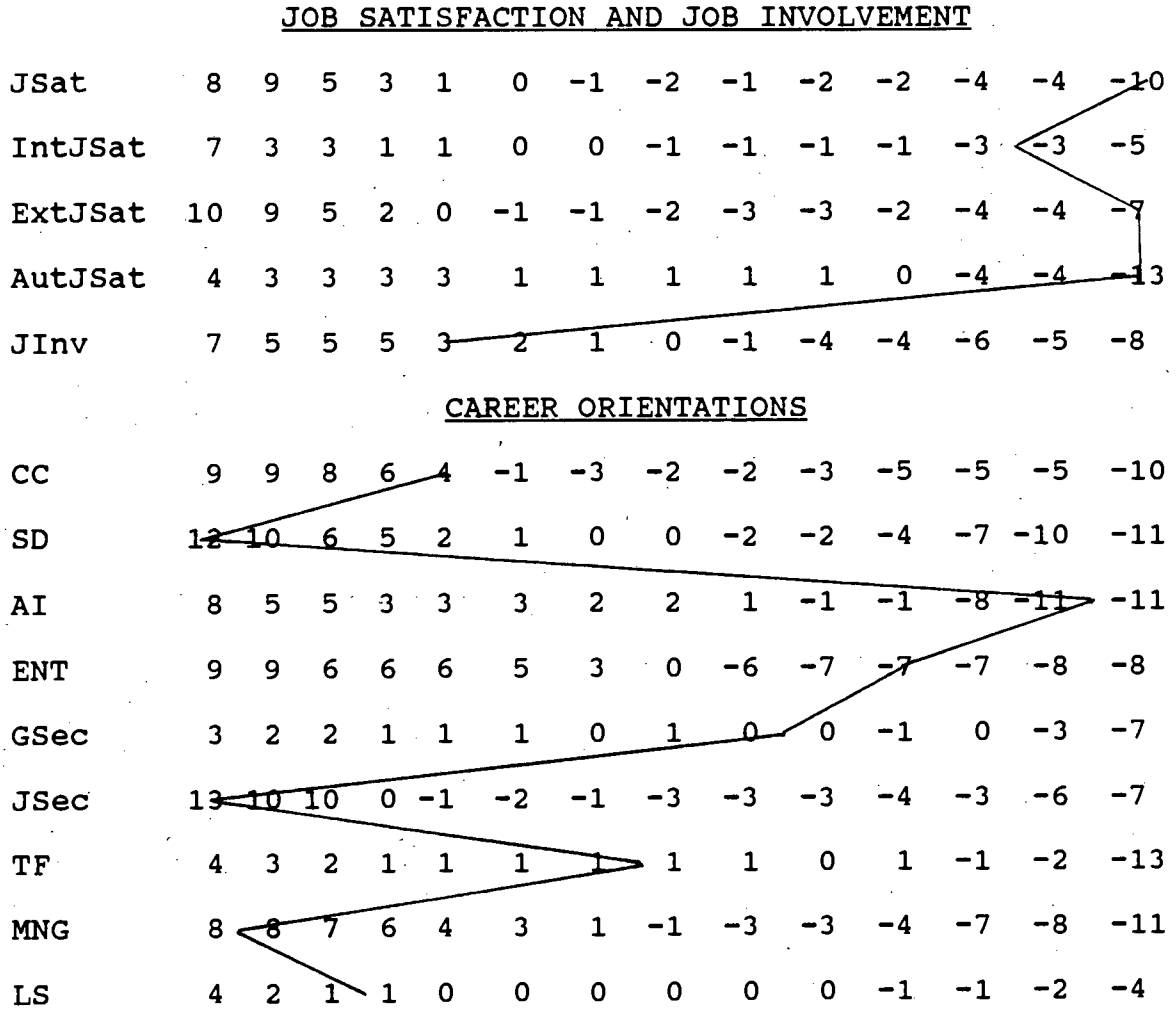
challenging work seem to lack challenge and consequently depress the intrinsic job satisfaction they experience. The degree to which their desire for Challenge/Competition is met by their jobs, given the high value engineers place on this dimension, could thus be a great source of either satisfaction or dissatisfaction. A manager's primary considerations should therefore be to provide challenging work for their subordinates within a competitive climate.

The engineer's profile is similar to that of accountants, the only notable deviation being the extremely low Geographic Security orientation of engineers. This is a finding that may hold important implications for career counselling. It presents candidates with similar value systems but different skills with the flexibility to enter either of two diverse fields (engineering or accountancy) knowing that their values may be compatible with either field.

Nurses

Nurses had the lowest job satisfaction of all the professions sampled (Figure 17). They also had the lowest scores on all the job satisfaction subscales excepting the intrinsic job satisfaction scale where they nevertheless had

Figure 17 A Profile of the Relative Position of NURSES on the Variables under Study



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JSec	=	Job Security Orientation
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

extremely low scores. This is an alarming finding and one that should not be ignored by nursing administrators. Nurses' dissatisfaction with pay and work hours was documented in Chapter Five (e.g. "Overworked, underpaid", 1990; "shortage of", 1990). It appears, however, that it may also be necessary for administrators to consider other facets of satisfaction introduced in Chapter Five, such as variety, identity, and in particular, autonomy. In contrast to their satisfaction, nurses had moderately high job involvement. Once again the independence of these two variables was demonstrated.

The nurses' career orientation profile was also one of extremes. Of all the professions sampled they had the highest orientation towards Service/Dedication, Job Security and (together with engineers) towards Managerial Competence. They also had a moderately high concern for a balanced/integrated lifestyle. At the other extreme they placed little value on Autonomy/Independence and were relatively unconcerned with entrepreneurial activity (for which they had little or no opportunity anyway).

The high scores on both the Service/Dedication and Managerial Competence factors should not be seen as incompatible. In fact these dual values appear to be analogous to McClelland's (1970) conception of the "social power" motive. It is this motive that he believes characterizes the successful manager. According to McClelland the successful manager has four discernible power-related characteristics:

> "Firstly he believes in an authority system, that the institution is more important than the individuals in it.
>
> Secondly, he likes to work and he likes the discipline of work, which leads to orderly management. Thirdly, he is altruistic in that he will sacrifice his own self-interest for the welfare of the company and does this in some obvious way that everybody can see. And fourthly, he believes in justice above everything else, that people must have even-handed treatment" ("McClelland an Advocate of Power", 1975, p. 27).

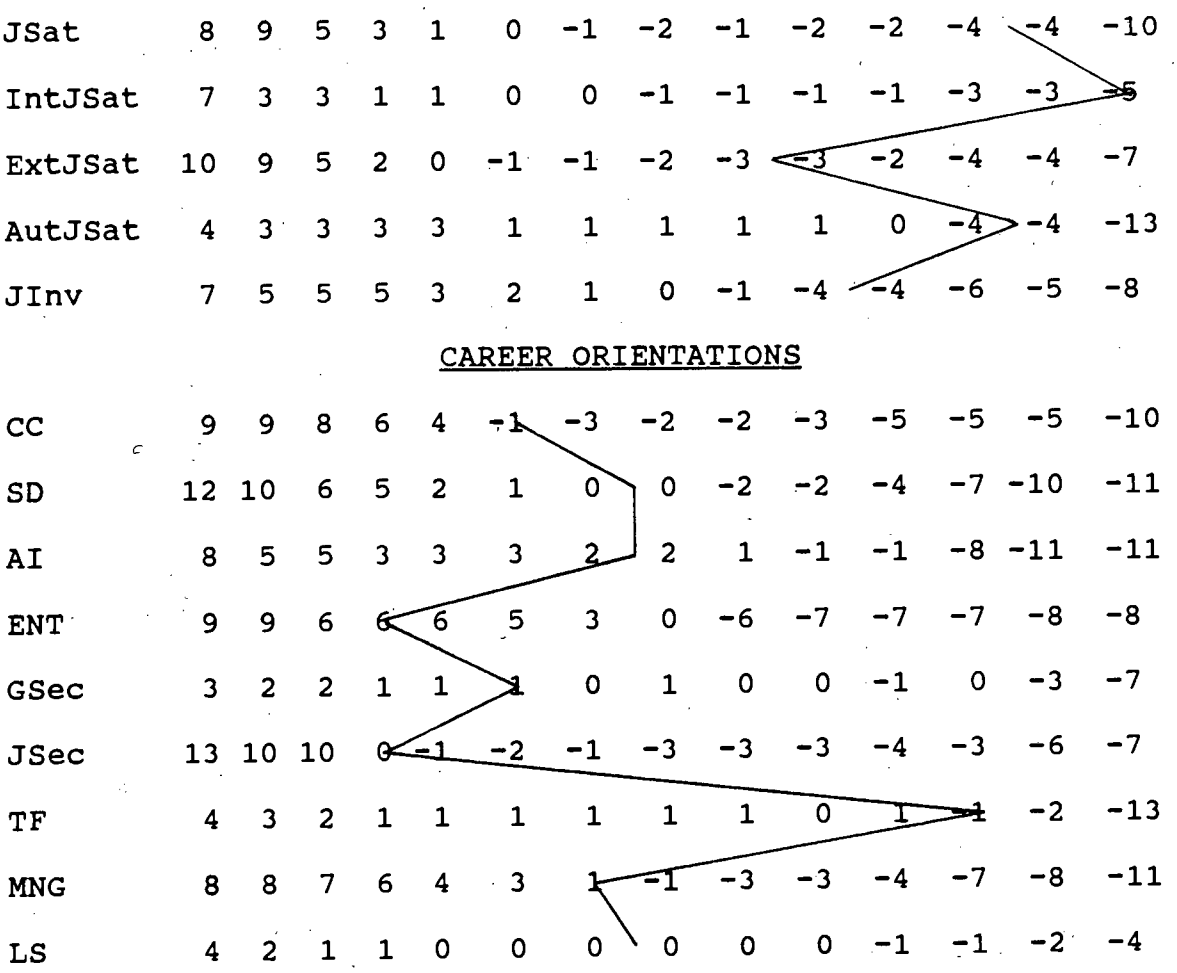
Nurses then were orientated towards management and fulfilled McClelland's implicit value profile of the successful manager. They may thus have the potential to be successful managers, and the established lines of career progression in nursing do emphasize progression into administrative and managerial roles (Scorpio, 1989). However, from informal discussions with nurses conducted by this researcher, it appears that nurses have very little training in managerial skills and this seems to be an area in which some training may help them to realise their potential. Such efforts may also help reduce the alarmingly low job satisfaction experienced by nurses.

Pharmacists

Pharmacists, like nurses, proved to have extremely low job satisfaction, and they also evidenced low job involvement. From their satisfaction profile (Figure 18) it appears that their low satisfaction with intrinsic job facets is of particular concern. This is not an isolated finding. As reported in the literature review (Chapter Five), Humphrys and O'Brien (1986) similarly reported the low job satisfaction of pharmacists relative to other professions in Australia. They argued that the low job satisfaction pharmacists experience is due to their low level of skill utilisation. This is a result of technological and procedural changes in the way drugs are manufactured, prescribed and distributed. Despite their highly developed professional skills, pharmacists find themselves fulfilling a small businessman role, simply filling doctor's prescriptions for drugs that are already manufactured and packaged, and of course selling toiletries!

Turning to their career orientation profile, pharmacists scored moderately highly on both the Entrepreneurship and Job Security orientations. They also evidenced a low orientation towards Technical/Functional Competence. For the midcareer pharmacists surveyed, their low Technical/Functional orientation may be a consequence of the low skill utilization they have experienced. In effect they may reduce their discomfort with

Figure 18 A Profile of the Relative Position of PHARMACISTS on the Variables under Study



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LS	=	Lifestyle Integration Orientation

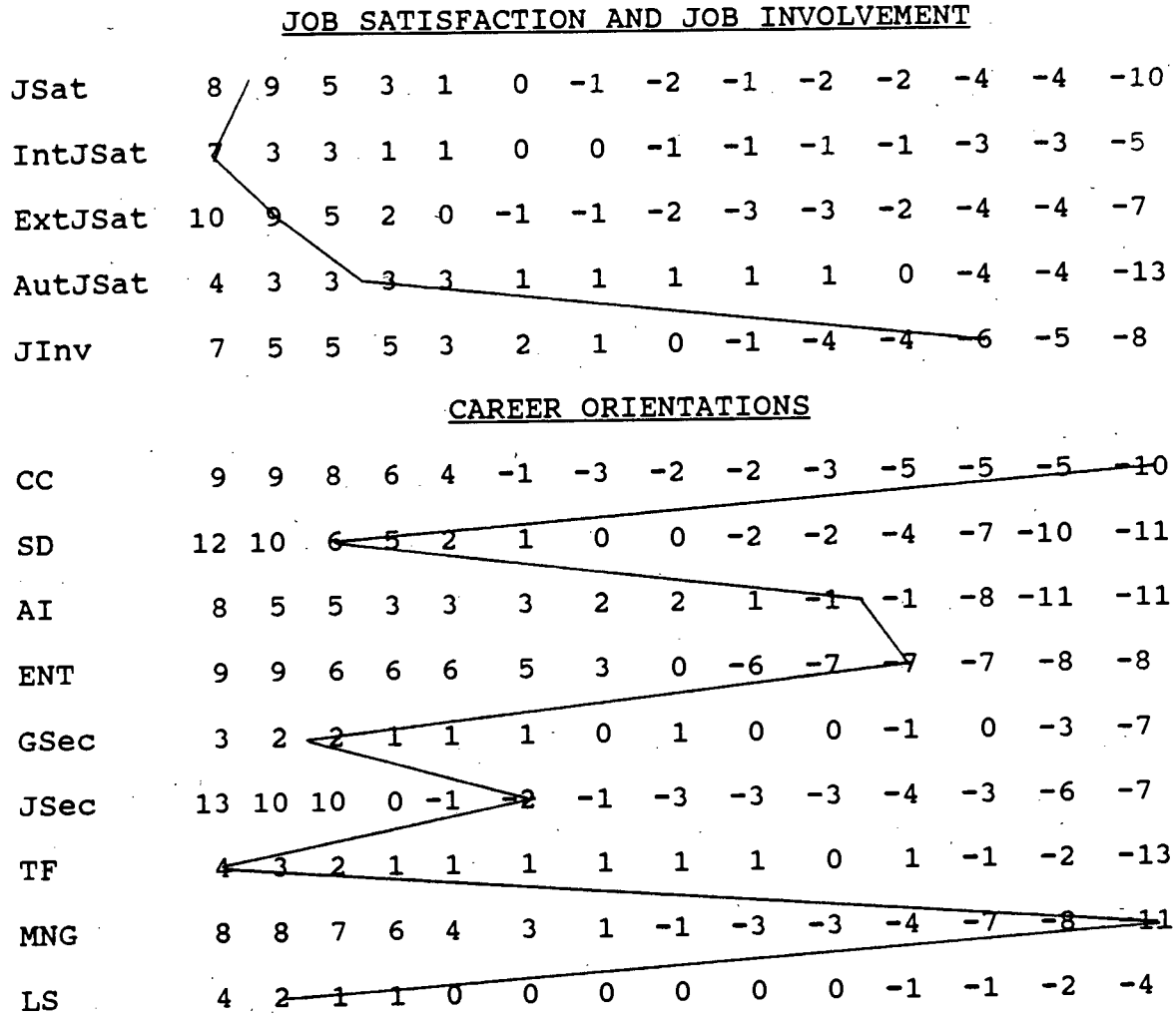
low skill utilization by devaluing technical competence in their field.

Physiotherapists

Physiotherapists proved to be extremely satisfied with their jobs. Overall they were possibly the most satisfied of all the professions sampled (Figure 19). However, they felt very little involvement in their job. The contrast between the high satisfaction and low involvement of physiotherapists makes them an interesting group for study and furthermore illuminates the differences between the two constructs. The nature of the difference becomes apparent when their career orientation profile is taken into account.

Their career orientation profile was one of extremes. They had an extremely high orientation towards Technical/Functional Competence, and were highly concerned with having a balanced lifestyle, living in a particular area, and being of service. On the other hand they put the lowest value of all the professions sampled on the Competition/Challenge and the Managerial Competence factors. They also showed little interest in entrepreneurial activities and little concern for their own autonomy. Other than their desire to be of service, their concerns seem to cluster around a balanced and stable lifestyle.

Figure 19 A Profile of the Relative Position of PHYSIOTHERAPISTS on the Variables under Study



KEY:

JSat	=	General Job Satisfaction
IntJSat	=	Intrinsic Job Satisfaction
ExtJSat	=	Extrinsic Job Satisfaction
AutJSat	=	Automatic Job Satisfaction
JInv	=	Job Involvement
CC	=	Challenge/Competition Orientation
SD	=	Service/Dedication Orientation
AI	=	Autonomy/Independence Orientation
ENT	=	Entrepreneurship Orientation
GSec	=	Geographic Security Orientation
JSec	=	Job Security Orientation
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

They want to exercise skills they are comfortable with, stay in the same area and not neglect their friends and family.

From the analysis of their career orientations it is apparent that physiotherapists have a low concern for what may be considered higher order needs, for example, challenge and autonomy. It follows then that their higher order needs are easily satisfied because they are such modest ones. This speculation is in congruence with the discussion in Chapter Five of the role of values in moderating job satisfaction and of the discrepancy theories. In particular it follows the valence model introduced in Chapter Five. According to the model, a job which has a high positive instrumentality for an outcome with low but positive valence will lead to greater satisfaction than would be the case if the instrumentality was less. The job facets that contribute to intrinsic satisfaction are facets such as challenge and autonomy (see Chapter Five). Consequently, physiotherapists were easily and highly satisfied with the degree to which their job met these needs because these need strengths were weak.

By contrast, their job involvement was low. It was suggested in Chapter Four that job involvement was also related to higher order needs, particularly the need for personal growth. It will be argued later (in Chapter Eleven) that job involvement is partly the result of the anticipation that one's job would provide the environment wherein higher order needs might be met. However, as appears to be true for

physiotherapists, where the higher order needs are less salient there is little point in becoming psychologically tied to (involved in) one's job.

Psychologists

Psychologists reported above average job satisfaction and average job involvement relative to the other professions sampled (Figure 20).

Their career orientation profile indicates that their primary concerns are to exercise their Technical/Functional Competence and to work autonomously. They also exhibited an above average desire to serve and a concern for job security. On the other extreme of the profile they had low orientations towards Competition/Challenge and surprisingly, towards a balanced lifestyle. Their low orientation towards competition is probably appropriate to their work content as competition may well be destructive in a therapeutic setting. However, one might have expected psychologists to have considered a balanced lifestyle essential, particularly in terms of work and family life.

Radiographers

Radiographers exhibited average to moderately low job satisfaction and had the lowest job involvement of all the professions sampled (Figure 21). Given the lack of knowledge

Figure 20 A Profile of the Relative Position of PSYCHOLOGISTS on the Variables under Study

JOB SATISFACTION AND JOB INVOLVEMENT

JSat	8	9	5	3	1	0	-1	-2	-1	-2	-2	-4	-4	-10
IntJSat	7	3	3	1	1	0	0	-1	-1	-1	-1	-3	-3	-5
ExtJSat	10	9	5	2	0	-1	-1	-2	-3	-3	-2	-4	-4	-7
AutJSat	4	3	3	3	3	1	1	1	1	1	0	-4	-4	-13
JInv	7	5	5	5	3	2	1	0	-1	-4	-4	-6	-5	-8

CAREER ORIENTATIONS

CC	9	9	8	6	4	-1	-3	-2	-2	-3	-5	-5	-5	-10
SD	12	10	6	5	2	1	0	0	-2	-2	-4	-7	-10	-11
AI	8	5	5	3	3	3	2	2	1	-1	-1	-8	-11	-11
ENT	9	9	6	6	6	5	3	0	-6	-7	-7	-7	-8	-8
GSec	3	2	2	1	1	1	0	1	0	0	-1	0	-3	-7
JSec	13	10	10	0	-1	-2	-1	-3	-3	-3	-4	-3	-6	-7
TF	4	3	2	1	1	1	1	1	1	0	1	-1	-2	-13
MNG	8	8	7	6	4	3	1	-1	-3	-3	-4	-7	-8	-11
LS	4	2	1	1	0	0	0	0	0	0	-1	-1	-2	-4

KEY:

JSat	=	General Job Satisfaction
IntJSat	=	Intrinsic Job Satisfaction
ExtJSat	=	Extrinsic Job Satisfaction
AutJSat	=	Automatic Job Satisfaction
JInv	=	Job Involvement
CC	=	Challenge/Competition Orientation
SD	=	Service/Dedication Orientation
AI	=	Autonomy/Independence Orientation
ENT	=	Entrepreneurship Orientation
GSec	=	Geographic Security Orientation
JSec	=	Job Security Orientation
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

Figure 21 A Profile of the Relative Position of RADIOGRAPHERS on the Variables under Study

JOB SATISFACTION AND JOB INVOLVEMENT

JSat	8	9	5	3	1	0	-1	-2	-1	-2	-2	-4	-4	-10
IntJSat	7	3	3	1	1	0	0	-1	-1	-1	-1	-3	-3	-5
ExtJSat	10	9	5	2	0	-1	-1	-2	-3	-3	-2	-4	-4	-7
AutJSat	4	3	3	3	3	1	1	1	1	1	0	-4	-4	-13
JInv	7	5	5	5	3	2	1	0	-1	-4	-4	-6	-5	-8

CAREER ORIENTATIONS

CC	9	9	8	6	4	-1	-3	-2	-2	-3	-5	-5	-5	-10
SD	12	10	6	5	2	1	0	0	-2	-2	-4	-7	-10	-11
AI	8	5	5	3	3	3	2	2	1	-1	-1	-8	-11	-11
ENT	9	9	6	6	6	5	3	0	-6	-7	-7	-7	-8	-8
GSec	3	2	2	1	1	1	0	1	0	0	-1	0	-3	-7
JSec	13	10	10	0	-1	-2	-1	-3	-3	-3	-4	-3	-6	-7
TF	4	3	2	1	1	1	1	1	1	0	1	-1	-2	-13
MNG	8	8	7	6	4	3	1	-1	-3	-3	-4	-7	-8	-11
LS	4	2	1	1	0	0	0	0	0	0	-1	-1	-2	-4

KEY:

JSat	=	General Job Satisfaction
IntJSat	=	Intrinsic Job Satisfaction
ExtJSat	=	Extrinsic Job Satisfaction
AutJSat	=	Automatic Job Satisfaction
JInv	=	Job Involvement
CC	=	Challenge/Competition Orientation
SD	=	Service/Dedication Orientation
AI	=	Autonomy/Independence Orientation
ENT	=	Entrepreneurship Orientation
GSec	=	Geographic Security Orientation
JSec	=	Job Security Orientation
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

about the job involvement construct, and of the behavioural implications of high and low job involvement, radiographers may be the fruitful subject of further study into this area. It may be particularly illuminating if radiographers were contrasted with architects who exhibited the highest level of job involvement of all the professions sampled.

Turning to their career orientation profile, radiographers appeared to have a similar value hierarchy to that of physiotherapists. The one exception was that radiographers had a lower orientation towards Technical/Functional Competence. Radiographers placed extremely high value on security (both job and geographic), on a balanced lifestyle, and slightly less high, on being of service. (Of course, the caveat that the Lifestyle Integration measure was unreliable should be reiterated.) They placed little value on entrepreneurial activities, on autonomy, on competition and challenge, and on Managerial Competence.

The career orientation profile of radiographers seems to represent an emotional distancing from the work itself by focusing on primary issues such as security and a balance with other life areas. Possibly the nature of their work does not provide an arena for self-expression or growth and correspondingly radiographers exhibit little concern for these higher level needs. As a consequence they also exhibit low job involvement.

Many of these findings may be explained by the present work situation of radiographers in South Africa. They are not

allowed to go into private practice and work for low salaries. Radiographers have requested permission from the Medical and Dental Council to go into private practice but thus far permission has been refused. Perhaps with the greater sense of self-determination a private practice would afford, radiographers might approach their jobs with greater involvement. The greater possibility of challenge, independence and entrepreneurship, for example, may also elicit stronger concern for higher level need based orientations.

Social Workers

Social workers emerged from the survey as having relatively low job satisfaction and low job involvement (Figure 22). In particular they derived little satisfaction from the extrinsic facets of their job and from the amount of autonomy they were afforded. The relatively low satisfaction of social workers, particularly with contextual factors of their work, is alarming and may require further investigation. It is indeed a pity that the essential helping services such as nursing and social work are not valued and supported more by society.

Their career orientation profile was similar to that of radiographers, showing a high motivation to be of service and for security (both job and geographic). Their orientation towards Managerial Competence was also high but to a lesser degree than the orientations mentioned above. At the other extreme of the profile they evidenced an extremely low

Figure 22 A Profile of the Relative Position of SOCIAL WORKERS on the Variables under Study

JOB SATISFACTION AND JOB INVOLVEMENT

JSat	8	9	5	3	1	0	-1	-2	-1	-2	-2	-4	-4	-10
IntJSat	7	3	3	1	1	0	0	-1	-1	-1	-1	-3	-3	-5
ExtJSat	10	9	5	2	0	-1	-1	-2	-3	-3	-2	-4	-4	-7
AutJSat	4	3	3	3	3	1	1	1	1	1	0	-4	-4	-13
JInv	7	5	5	5	3	2	1	0	-1	-4	-4	-6	-5	-8

CAREER ORIENTATIONS

CC	9	9	8	6	4	-1	-3	-2	-2	-3	-5	-5	-5	-10
SD	12	10	6	5	2	1	0	0	-2	-2	-4	-7	-10	-11
AI	8	5	5	3	3	3	2	2	1	-1	-1	-8	-11	-11
ENT	9	9	6	6	6	5	3	0	-6	-7	-7	-7	-8	-8
GSec	3	2	2	1	1	1	0	1	0	0	-1	0	-3	-7
JSec	13	10	10	0	-1	-2	-1	-3	-3	-3	-4	-3	-6	-7
TF	4	3	2	1	1	1	1	1	1	0	1	-1	-2	-13
MNG	8	8	7	6	4	3	1	-1	-3	-3	-4	-7	-8	-11
LS	4	2	1	1	0	0	0	0	0	0	-1	-1	-2	-4

KEY:

JSat	=	General Job Satisfaction
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MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration Orientation

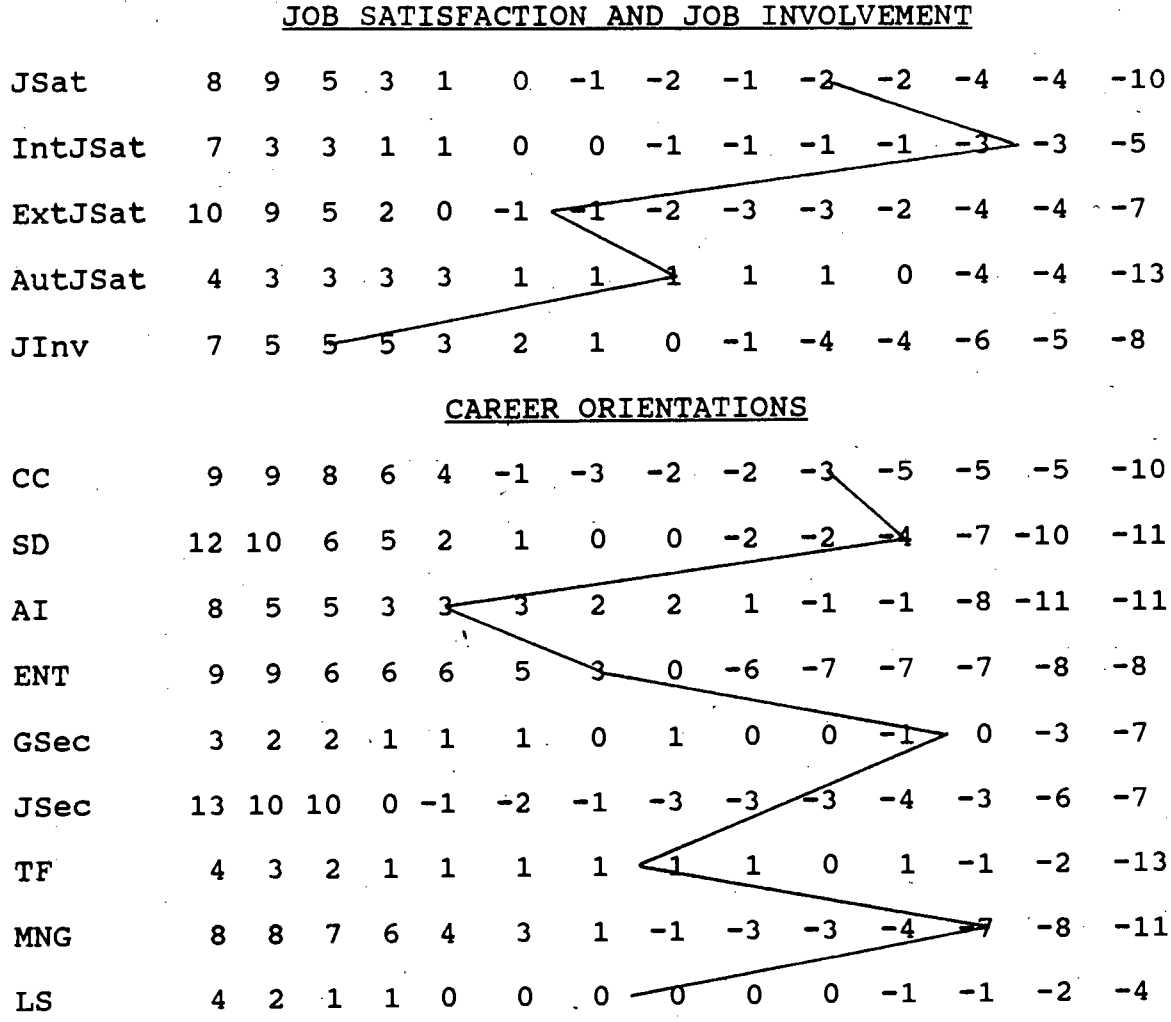
orientation towards the Autonomy/Independence and Entrepreneurship factors, and relatively little concern for a balanced lifestyle.

The social worker's profile of orientations seemed appropriate to their jobs to the extent that their primary focus is on serving others and dedicating themselves to important social issues and causes. Furthermore, their concern with Geographical Security is appropriate to a community service ethic while the management of social services requires some concern for Managerial Competence. Their low orientation towards entrepreneurial activities may, however, mean that social workers are ill prepared for the future roles they may be called on to perform. A task force headed by Van Zyl (Van Zyl, 1989) identified the critical future roles of social workers in South Africa. Out of the 11 critical roles they shortlisted, both the first (programme designer) and sixth (innovator) require an Entrepreneurial orientation. It may thus be important for the future practice of the profession that social workers cultivate a stronger orientation towards entrepreneurial activities.

Veterinarians

Veterinarians exhibited an unusual dichotomy between their satisfaction with intrinsic and extrinsic aspects of their job (Figure 23). Although their extrinsic and autonomic job satisfaction scores were about average for South African

Figure 23 A Profile of the Relative Position of VETERINARIANS on the Variables under Study



KEY:

JSat	=	General Job Satisfaction
IntJSat	=	Intrinsic Job Satisfaction
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GSec	=	Geographic Security Orientation
JSec	=	Job Security Orientation
TF	=	Technical/Functional Competence Orientation
MNG	=	Managerial Competence Orientation
LS	=	Lifestyle Integration

professionals, they reported very low intrinsic job satisfaction.

This is an intriguing finding, particularly as their job would appear to encompass all the components of intrinsic satisfaction introduced in Chapter Five and summarised in Figure 5. Veterinary work seems to be varied and meaningful, provides autonomy in the sense of responsibility and presumably the feedback veterinarians receive is fairly clear-cut. In support of that conjecture, veterinarians report high job involvement indicating perhaps that they would anticipate that their job may fulfill higher order needs. The reason for their low intrinsic satisfaction may be explained by the intervening effect of their work-related values. The career orientation profile gives an indication of the most salient work-related values, however in the case of veterinarians the picture remains confused.

The career orientation profile of veterinarians had few striking features. They were low on the Managerial Competence, Security (both Job and Geographic) and Service/Dedication factors and average to low on the Competition/Challenge factor. The only orientation on which they scored even slightly above the average band was the Autonomy/Independence orientation Little could be deduced from this profile that has much bearing on the question of why veterinarians experience low intrinsic satisfaction. In the following chapter the analyses regressing the career orientations onto the satisfaction variables are described. These analyses may throw a more specific light on which of the career orientations of

veterinarians moderates the effect of their job characteristics on their job satisfaction.

Conclusion

The analyses described in this chapter provided intriguing insights into the career orientations of members of fourteen South African professional groups. These insights in turn may generate meaningful guidelines for the management and counselling of people presently employed in these professions.

The examination of the career orientations in conjunction with an evaluation of the job satisfaction and job involvement experienced by the various professionals provided most important insights into the shortcomings of the traditional trait and factor approach to career counselling. The trait and factor approach introduced in Chapter Two seeks a match between individual personality factors and environmental characteristics. The shortcoming of this approach arises from the manner in which environments are characterised.

If one follows Holland's (1973, 1985, 1987) approach for example, Holland being the most popular theorist in the trait and factor mould (Watkins, Bradford, Lew & Himmell, 1986), an environment would be characterised by the dominant characteristics of the people within the environment. Thus, in Holland's terms, the career orientation profile in Figure 17 may be assumed to describe the nursing environment. (In fact Holland (1973, 1975) describes environments in terms of the

typology in Chapter Two. However, it is his methodology that is under scrutiny here, and there are sufficient similarities between the career orientations and Holland's typology to draw a meaningful analogy.)

The problem arises when it is considered that the average career orientation profile in Figure 17 is the average profile of a person who lacks job satisfaction as evidenced in the satisfaction profile in Figure 17. How the problem would present itself may be illustrated by an example.

Assume a career counsellor could match a client's career orientation profile with that in Figure 20 and following the approach typified by Holland's (1985) theory, recommended a career in nursing. The counsellor may well have done a great disservice to the client by recommending a career which obviously offers a person with that orientation profile little satisfaction.

What is needed then is an approach to career counselling that emphasises the interaction between people and their environments to produce the work outcomes career counsellors must surely try to achieve - primarily job satisfaction. The following chapter describes a research and analytic approach that may provide the groundwork for the envisaged counselling approach. By regressing the career orientations onto the satisfaction variables the following chapter may answer the question of which value patterns are associated with satisfaction within a particular professional context. The analyses thus integrate contextual factors (professions) and

personal factors (career orientations) and describe their interaction to produce the counsellors end goal, job satisfaction.

The emphasis therefore shifts from simply describing the average person in a particular environment to the more pertinent question of what makes some people job involved and satisfied in that environment.

CHAPTER TEN

PREDICTION OF JOB SATISFACTION BY MEANS OF CAREER ORIENTATIONS

The relative levels of each variable in each profession were analysed in the previous chapter. An attempt is made in this chapter to discern relationships between the variables. The issue thus shifts from what career orientations are dominant in each profession to which career orientations are actually the most important in terms of their contribution to job satisfaction. The analyses to be documented in this chapter are direct tests of the first research hypothesis, and along with the analyses to be presented in the following chapter, form the heart of this thesis. To recap, the research hypothesis based on Schein's (1985) theory is as follows:

> "The job satisfaction of members of a professional group may be predicted by means of a career orientation."

Initially, regression of the career orientations onto the dependent variable job satisfaction, was performed using the entire sample (all fourteen professional groups taken together) to test whether any general relationships held. Then, in a direct test of the research hypothesis, the analysis was repeated separately for each professional group.

The hypothesis would be supported by any regression model which could predict a substantial amount of the variance in

job satisfaction and where one career orientation made a dominant contribution to the model's predictive power. If any model could not account for much of the variance in job satisfaction or where two or more orientations contributed similar partial correlations to the model the null hypothesis would be supported. That is, it would be concluded that the professional group's job satisfaction was independent of any specific career orientation.

To further elucidate the results of these analyses and the relationship between career orientations and job satisfaction the regression analyses were repeated for each of the components of job satisfaction that had been isolated by the factor analytic procedures presented in Chapter Eight. More specifically, the career orientations were regressed onto the variables intrinsic, extrinsic and autonomic job satisfaction.

Once again, summary tables will be used to present as clearly and concisely as possible the results of the stepwise regression analyses. The following columns will be included in each table:

Step. This first column indicates the stage at which each independent variable is entered.

Variable. The second column lists the independent variable entered at each stage. A key to the abbreviations used is included in Table 32.

TABLE 32: Summary of the Stepwise Regression Procedure for the Total Sample of South African Professionals (N = 1784) for the Dependent Variable Job Satisfaction.

STEP	VARIABLE	PARTIAL R^2	MODEL R^2	Cp	F	PROB > F
1	TF	0.025	0.025	46.314	45.099	.0001
2	SJ	0.006	0.031	37.031	11.072	.0009
3	SD	0.010	0.041	20.494	18.367	.0001
4	SG	0.005	0.045	13.388	9.063	.0026
5	CC	0.004	0.049	8.890	6.488	.0109

Key to Variable Abbreviations

AI = Autonomy/Independence Orientation
CC = Challenge/Competition Orientation
ENT = Entrepreneurship Orientation
LS = Lifestyle Integration Orientation
M = Managerial Competence Orientation
SD = Service/Dedication Orientation
SG = Geographic Security Orientation
SJ = Job Security Orientation
TF = Technical/Functional Competence Orientation

Partial R^2. This column records each independent variable's unique contribution to the model. That is the degree of common variance between the particular independent variable (career orientation) and the dependent variable (for example, intrinsic job satisfaction or job involvement) after controlling for variance that has already been accounted for by independent variables entered into the equation at earlier steps.

Model R^2. This shows the combined strength of the independent variables' "prediction" of job satisfaction. It is the variation in the dependent variable that is attributed to variation in the independent variables in the model (SAS Institute, 1982). As mentioned earlier the term "prediction" is used advisedly and must be interpreted with caution. The multiple regression analyses reveal correlational relationships but the direction of causality must be the subject of speculation. Given the theoretical understanding of the dependent variables documented in previous chapters, it will be argued that existing career orientations have a determining effect on job satisfaction and involvement. However, it is conceivable that the converse is true.

Cp. The C_p statistic at each step is recorded in the next column. This statistic was discussed in Chapter Seven. It denotes a good fit where the value of C_p first approaches the number of variables in the model, including the intercept

(this number is represented by the letter p). Note that before judgements based on the C_p statistic are made, variables are only entered into the model if they are independently and significantly related to the dependent variable.

F. This F value is the ratio of the regression mean square to the error mean square, and indicates the strength of the relationship between the independent variable entered at each step and the dependent variable.

Prob > F. The final column gives an indication of the significance of the relationship calculated at each step. It is an estimate of the probability of a larger F value occurring by chance.

Prediction of Job Satisfaction by Means of Career Orientations

A summary of the stepwise selection procedure for the total sample (N = 1784) is given in Table 32. From the table it can be seen that five variables were significantly related to the dependent variable and were entered into the model. However, their combined effect accounted for less than 5% of the variance in job satisfaction among South African professionals. (The percentage of common variance may be calculated by multiplying the Model R^2 value by 100). The Technical/Functional Competence orientation accounted for half

of the explained variance and the variables entered at each further step made successively smaller contributions.

Although these correlations were significant they are not meaningful in the sense that so little variance was explained. The fact that these small correlations were significant is due to the large sample size employed in the calculation. The larger the sample the closer it approximates the universe from which it was drawn and the more likely it becomes that even minor correlations reflect actual relationships in the greater universe.

The results of the analysis summarised in Table 32 implied that no meaningful overall relationship existed between job satisfaction and career orientations per sé. This initial finding was in line with Schein's (1985) theory. Effectively Schein posed a contingency theory - if one's career orientation is compatible with the nature of one's work, job satisfaction will result. As the total sample employed in the initial analysis comprised members of different professions and consequently employed in work of vastly differing nature it was in any case unlikely (extrapolating from the theory) that a clear relationship would emerge. The different types of work among the different professions would have been a source of extraneous variance in the analysis.

In the following analyses, however, this source of extraneous variance was greatly diminished. In these analyses the multiple regression analysis was repeated for each

professional group separately. Assuming that each profession represented work of a relatively homogeneous nature it was more likely that some career orientations may have been more compatible with (or more easily accommodated within) particular professions than other career orientations. If Schein's (1985) theory held true then this compatibility would be reflected by greater job satisfaction. The following analyses were direct tests of that hypothesis. The results of the multiple regression analyses would show whether any particular career orientations were related to job satisfaction for each profession. Thus the analyses would demonstrate which orientations incorporated values which were compatible with the nature of work within each profession. The results of these analyses are summarised in Table 33.

By and large the analyses yielded somewhat disappointing results. Only six out of the fourteen analyses resulted in predictions of greater than ten percent of job satisfaction. These were the analyses involving attorneys (the prediction level reached 24%), dieticians (24%), doctors (14%), nurses (10%), pharmacists (14%) and psychologists (23%). The analyses for accountants (10%) and veterinarians (10%) also warrant mention.

Twenty-four percent of the job satisfaction of attorneys could be predicted by means of the career orientations Service/Dedication and Autonomy/Independence. This is an interesting finding in that attorneys on the whole had relatively low scores on the Service/Dedication scale despite

TABLE 33: SUMMARY OF THE STEPWISE REGRESSION PROCEDURE FOR THE DEPENDENT VARIABLE JOB SATISFACTION FOR EACH PROFESSIONAL GROUP

Profession	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
Acc	99	1	M	0.099	0.099	6.354	10.675	.0014
Arc	155	1	SD	0.045	0.045	0.833	7.277	.0078
Att	97	1	SD	0.149	0.149	9.922	16.742	.0001
		2	AI	0.091	0.240	0.809	11.377	.0011
Dent	106	1	TF	0.067	0.067	0.687	7.563	.0070
Diet	69	1	SD	0.188	0.188	5.177	15.783	.0002
		2	SJ(-)*	0.048	0.236	2.987	4.190	.0446
Doc	177	1	SD	0.075	0.075	7.507	9.340	.0028
		2	TF	0.032	0.107	5.311	4.113	.0449
		3	ENT	0.031	0.138	3.236	4.103	.0452
Eng	179	1	TF	0.028	0.028	2.223	5.077	.0255
Nurs	112	1	M(-)*	0.068	0.068	4.226	8.099	.0053
		2	SG	0.035	0.103	2.008	4.257	.0415
Phar	139	1	SD	0.069	0.069	10.651	10.261	.0017
		2	AI(-)*	0.049	0.118	5.004	7.537	.0069
		3	CC	0.026	0.144	2.878	4.161	.0433
Phys	131	1	SJ(-)*	0.046	0.046	1.713	6.269	.0135
Psy	108	1	CC	0.120	0.120	13.571	14.548	.0002
		2	SD	0.076	0.196	5.350	9.999	.0020
		3	AI(-)*	0.030	0.226	3.257	4.122	.0449
Rad	119	1	AI(-)*	0.057	0.057	2.210	7.143	.0086
Soc	149	1	TF	0.050	0.050	6.011	7.806	.0059
Vet	191	1	SG	0.065	0.065	5.339	13.194	.0004
		2	M	0.030	0.095	1.188	6.211	.0136

* Note: A minus sign in brackets after an independent variable denotes an inverse relationship between that variable and the dependent variable.

relatively high reported job satisfaction. (References to the relative standing of the different professions on the research variable are drawn from the tables in Chapter Nine). According to the regression model the low orientation of attorneys as a whole to Service/Dedication should have depressed their satisfaction scores. Simultaneously, however, following the same reasoning, their high orientation towards Autonomy/Independence would have raised their satisfaction and thus compensate for the effect of their low Service/Dedication orientation. Overall, it would appear that concern for justice (Service/Dedication) and individual freedom and autonomy (Autonomy/Independence) are values that are compatible with the practice of law and hence may lead to greater job satisfaction.

The job satisfaction of dieticians could also be predicted to a high degree from the strength of their orientation towards Service/Dedication (as for attorneys) and by an inverse proportion to their desire for Job Security. Dieticians were about average on both these career orientations and below average on job satisfaction, so these findings seem to be in congruence with each other. The negative relationship between the Job Security orientation and job satisfaction implies that the dietician's career may not actually provide much job security. Consequently, dieticians who were concerned with their job security may have found the lack thereof leading to low overall job satisfaction.

Psychologists were the only other profession for whom a large percentage of job satisfaction could be predicted by means of career orientations. However, these results provide something of an enigma. The job satisfaction of psychologists, according to the analysis, is dependent on high Challenge/Competition and Service/Dedication orientations and (to a lesser extent) on a low Autonomy/Independence orientation. It is undeniable that a high orientation towards Service/Dedication allied to a low orientation towards Autonomy/Independence may be values that are eminently compatible with the psychologist's job. Their job involves close work with other people (thus low independence) in a helping relationship (thus a high service orientation).

The strong relationship between challenge (in the sense of competing and winning) and job satisfaction at first seems incongruous in the context of the psychologist's job. How are the possibly conflicting motives to serve people and to compete with them reconciled. Possibly satisfied psychologists embody McClelland's (1975) concept of the socialised power motive which was introduced in the previous chapter. This power motive describes someone who needs to influence others' behaviour for the common good rather than for personal gain. Thus the regression analysis indicates that psychologists who are comfortable in a role of power and influence but whose motives are altruistic will derive satisfaction from his/her job.

The remaining analyses detailed in Table 33 provided no further surprises (and to all practical purposes few meaningful correlations).

Pharmacists' job satisfaction was related to high Service/Dedication and Challenge/Competition orientations and negatively to Autonomy/Independence. These values seem to be in accordance with the highly regulated and business orientated way in which the profession has evolved (see discussion in Chapter Nine).

Medical doctors' satisfaction was predictably related to high Service/Dedication and Technical/Functional Competence orientations. An Entrepreneurial orientation also proved to be important and this may indicate that private practice is both a more lucrative and a more satisfying avenue for medical practitioners to pursue their profession.

Nurses' satisfaction was negatively related to the Managerial Competence orientation and positively related to the Geographical Security anchor. Apparently the nursing profession did not provide sufficient outlet for the extremely high orientation towards Managerial Competence that was identified among nurses in the previous chapter. Given their low satisfaction with the autonomy their job affords them (Figure 17) it is probable that nurses were not given enough personal responsibility and leeway to manage effectively.

It is regretable that nurses' strong Service/Dedication orientation was not a source of job satisfaction. An external locus of control, emotional demands and a heavy workload are

associated with burnout (Firth & Britton, 1989; Garden, 1989; Snibbe, Radcliffe, Weisberger, Richards & Kelly, 1989; Wilson & Chiwakata, 1989). Nurses in South Africa appear to suffer from all these causes of burnout - their low autonomic satisfaction indicates an external locus of control, and their demanding work was discussed earlier ("Overworked, underpaid", 1990; "Shortage of", 1990). It is thus possible that the depersonalising effects of burnout mitigate against any satisfaction nurses may derive from fulfilling their service orientation.

Accountants with high Managerial Competence orientations had high job satisfaction. This was borne out by the fact that accountants scored extremely highly on both these variables. It was also a finding that underscored the fact that the work of accountants in South Africa allows great scope for people with managerial aspirations.

The only other result that has been identified as of note was that for veterinarians. According to this analysis, high job satisfaction among veterinarians was associated with high Geographical Security and Managerial Competence orientations.

Veterinary practice tends to be tied to a geographic, often rural, area. For those to whom the environment is important, this aspect of veterinary practice may in itself be a source for satisfaction. The greater extrinsic rewards associated with a well managed practice may be the moderating variables in the association between the Managerial Competence orientation and job satisfaction.

In concluding this section an overall observation must be made. The observation is that the career orientation with the strongest relationship to job satisfaction for each profession was, in almost every analysis, different from each profession's dominant career orientation as revealed in Chapter Nine. So, for example, the job satisfaction of pharmacists was strongly related to their orientation towards Service/Dedication while their predominant orientation was Entrepreneurship (Figure 18). Similarly, psychologists' satisfaction was related to Challenge/Competition, Service/Dedication and <u>negatively</u> to Autonomy/Independence. By contrast, their strongest orientations were <u>towards</u> Autonomy/Independence and Technical/Functional Competence.

It must therefore be stressed again that simply looking at dominant personality or value patterns within professions should not serve as a sole guideline for career counselling. The <u>interaction</u> between personality and environmental variables in producing valued work outcomes should perhaps be the guiding focus rather than a simplistic matching process that ignores the interactive effects.

The Career Orientations Theory Revisited

The analyses reported above represented a direct test of Schein's (1985) theory - or at least of Schein's implication that a career orientation determines job satisfaction. It is therefore possible at this stage to make a provisional

reassessment of the theory in the light of the results reported. Initially though it is necessary to consider how strong a level of prediction would have to be to represent support for the theory. Three extraneous factors mitigate against strong predictions.

Firstly it is impossible to ascertain whether all the major career orientations that may exist are covered by the nine scales of the Career Orientation Inventory. In Chapter Three a number of alternative career orientations that have been hypothesised were introduced. It is therefore possible that where no meaningful prediction was achieved (for engineers for example), it may be because we have failed to measure their most salient values.

Secondly, although for most of the professions surveyed, their work appears to be relatively homogenous and standardised, within their own context the way they practice their professions may be fairly diverse. Psychologists, for example, while they all have a similar focus on the psychology of individuals and groups, may specialise as counselling, clinical, industrial or research psychologists and so on. This variation obviously introduces error variance in that the values appropriate to the practice of industrial psychology may not be appropriate to that of clinical psychology and vice versa.

Thirdly, it is evident from the theory reviewed in Chapter Five that contextual work facets such as pay and work hours have a great effect on job satisfaction. While it may

be argued that appropriate values (for example dedication to a cause) may moderate the impact of the contextual facets it does seem unlikely that they would neutralise them completely. No matter how dedicated a person may be to his/her job, long work hours, for example, are nevertheless fatiguing, demoralising and in the extreme may be psychologically and physically debilitating. These contextual factors are not held constant across the different professions and again must be recognised as a source of error variance. (The effect of these factors will become apparent when intrinsic, extrinsic and autonomic satisfaction are specifically investigated.)

Given these three provisions, it may be concluded that the levels of predictions of job satisfaction reached in at least three of the analyses (above 20%) provides prima facie support for Schein's (1985) thesis. However, closer examination of these results put that conclusion into doubt.

The central precept of Schein's (1985) theory is that each person has <u>one</u> and only one career anchor/orientation. Only after stressing that statement does Schein (1985) go further in suggesting that that orientation may be implicated in the amount of job satisfaction an individual experiences. However, it is clear from the analyses reported in Table 33 that while one orientation may be more important than others, it is nevertheless true that job satisfaction appears to be determined rather by a combination of orientations. Thus Service/Dedication may be the most important determinant of job satisfaction amongst attorneys (predicting 15%) but

Autonomy/Independence is nevertheless important (sharing 9% of the unique variance in job satisfaction)!

These results then seem to suggest a major criticism of the central precept of the Career Anchor theory. It seems more likely that people hold a variety of different value orientations rather than one almost exclusive orientation. These different values need not be considered incompatible - for example a dedication to a cause and a desire for independence may be two values which need not conflict with each other. It does appear to be self-evident though, both from these analyses and from the analyses in the previous chapter that value orientations do seem to be arranged in a hierarchy of importance. It is therefore conceivable that if an individual was forced to choose between value orientations it would be possible. An hierarchical model of values is supported by the work of Ravlin and Meglino (1989) and mirrors, in form if not content, the typologies favoured by Holland (1973, 1985).

In conclusion it would appear that the Career Anchor/Orientation theory as defined by Schein (1985) must be viewed with some scepticism. However, the importance of value orientations, considered individually or in terms of hierarchies of value orientations, in determining job satisfaction has been underscored.

To further elucidate the relationship between career orientations and job satisfaction, the regression analyses were repeated for each of the factor components of job

satisfaction. These analyses, for the dependent variables intrinsic, extrinsic and autonomic job satisfaction, generally supported the above conclusions and furthermore clarified the parameters under which they held true. The results will be presented in the section which follows.

Prediction of Intrinsic, Extrinsic and Autonomic Job Satisfaction by Means of Career Orientations

One of the most important features of the regression of the career orientations onto the dependent variables intrinsic, extrinsic and autonomic job satisfaction was the contrast between the results. Consequently the analyses involving these three dependent variables will be presented and discussed together. The stepwise regression procedures were initially performed for the total group (N = 1784). The results of these analyses are reported in Tables 34 (dependent variable Intrinsic Job Satisfaction), 35 (dependent variable Extrinsic Job Satisfaction) and 36 (dependent variable Autonomic Job Satisfaction).

It was suggested earlier that extrinsic job facets would provide error variance in the regression analyses involving overall job satisfaction. If this were true then the analysis with intrinsic job satisfaction as the dependent variable - by concentrating on intrinsic job facets - might be expected to circumvent this problem and thus to reflect stronger predictions than comparable analyses would, using the overall

or extrinsic job satisfaction measures as the dependent variables. The results reflected in Tables 34, 35 and 36 bear these expectations out beautifully. In the analyses involving both the intrinsic (Table 34) and autonomic (Table 36) satisfaction measures, the level of prediction rose above that for overall job satisfaction (Table 32). R^2 values of .076 and .064 were recorded as opposed to an R^2 of .049 reached for the dependent variable overall job satisfaction. By contrast, the R^2 value dropped to -03 for the regression onto the dependent variable extrinsic job satisfaction.

From the above discussion it is clear that value orientations form a component of intrinsic job satisfaction. It is debatable, however, whether common variance of even 7.6% represents a meaningful (as opposed to statistically significant) level of prediction. Future research is needed to examine further sources of error variance in attempting to raise the prediction level.

The discussion now turns to the individual analyses and to the individual contributions of the various career orientations. Only the Service/Dedication orientation evidenced a worthwhile relationship with intrinsic job satisfaction (Table 34) with about 4.3% common variance. Technical/Functional Competence contributed about half of

TABLE 34: Summary of the Stepwise Regression Procedure for the Total Sample (N = 1784) for the Dependent Variable Intrinsic Job Satisfaction.

STEP	VARIABLE	PARTIAL R^2	MODEL R^2	C (p)	F	PROB > F
1	SD	0.043	0.043	62.051	79.513	.0001
2	TF	0.19	0.062	27.628	35.926	.0001
3	SG	0.003	0.065	23.508	6.054	.0140
4	CC	0.003	0.068	19.018	6.439	.0113
5	SJ(-)	0.004	0.072	14.117	6.870	.0088
6	AI(-)	0.002	0.074	11.406	4.699	.0303
7	LS	0.002	0.076	9.406	3.997	.0457

TABLE 35: Summary of the Stepwise Regression Procedure for the Total Sample (N = 1784) for the Dependent Variable Extrinsic Job Satisfaction

STEP	VARIABLE	PARTIAL R^2	MODEL R^2	C (p)	F	PROB > F
1	TF	0.101	0.010	34.723	17.644	.0001
2	SJ(-)	0.009	0.018	21.215	15.351	.0001
3	ENT	0.004	0.022	16.630	6.539	.0106
4	SG	0.002	0.025	12.476	6.128	.0134
5	AI(-)	0.003	0.030	9.593	4.872	.0274
6	SD	0.002	0.030	7.548	4.044	.0445

TABLE 36: Summary of the Stepwise Regression Procedure for the Dependent Variable Autonomic Job Satisfaction for the Total Sample (N = 1784).

STEP	VARIABLE	PARTIAL R^2	MODEL R^2	C (p)	F	PROB > F
1	SJ(-)	0.022	0.022	75.975	39.657	.0001
2	TF	0.022	0.044	36.164	41.046	.0001
3	ENT	0.011	0.054	17.933	20.075	.0001
4	SG	0.006	0.060	9.367	10.540	.0012
5	AI	0.004	0.064	4.627	6.746	.0095

that, and the remaining five orientations that entered the equation exerted only minor influence. The Job Security and Autonomy/Independence orientations exhibited a slight negative relationship with the dependent variable.

Interestingly, Job Security and Autonomy/Independence were also negatively related to extrinsic job satisfaction (Table 35). The major difference between this model and that in Table 34 was the low ranking of the Service/Dedication orientation. An orientation towards Service/Dedication was a far more important determinant of intrinsic job satisfaction than it was of extrinsic satisfaction. This was not surprising as it would be unlikely that the Service/Dedication orientation would have much direct effect on the extrinsic/contextual aspects of a job. Indirectly of course a dedication to service may result in a more effective professional service and eventually lead to greater extrinsic rewards. Hence the weak but positive relationship between Service/Dedication and extrinsic satisfaction.

The strongest predictor of autonomic job satisfaction (in an inverse relationship) was the Job Security orientation. Obviously a great concern for job security would be incompatible with satisfaction with the amount of autonomy the job allows. An exaggerated concern for job security implies an external locus of control and would demand an acceptance of organisational constraints. Because of this constant effort to identify and meet organisational demands and threats to job security, the job would be experienced as allowing little

autonomy whatever the reality of the work situation may be. An orientation towards Technical/Functional Competence also emerged as a relatively strong predictor of autonomic job satisfaction (in fact it was relatively closely correlated with all the measures of job satisfaction). Clearly if one values one's special skills, using them becomes a satisfying experience. The Autonomy/Independence orientation makes a minor positive contribution to the model but is noteworthy as it relates negatively to the other job satisfaction subscales. It is likely that this value orientation has the opposite effect of the Job Security orientation, encouraging one to take personal responsibility for and control over one's work environment. This in turn may result in the experience of greater control and autonomy in the work situation.

Prediction of Intrinsic, Extrinsic and Autonomic Job Satisfaction for Each Profession

The analyses to be documented in this section concentrate on each profession in turn. For each profession a multiple regression procedure was performed on each of the job satisfaction subscales, viz. intrinsic, extrinsic and autonomic job satisfaction (see Table 37). By examining the professions individually, as opposed to the analyses reported earlier of all the professions together, a great deal of error variance that would be introduced by the differing nature of the work each perform is eliminated and the level of

TABLE 37: Summary of the Stepwise Regression Procedure for the Dependent Variables Intrinsic, Extrinsic and Autonomic Job Satisfaction for each Professional Group.

PROFESSION : ACCOUNTANTS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	99	1	CC	0.102	0.102	6.214	11.122	.0012
EXTRINSIC JOB SAT.		1	M	0.086	0.086	3.759	9.180	.0031
		2	TF	0.045	0.130	0.893	4.975	.0280
AUTONOMIC JOB SAT.	No variables met the .055 significance level for entry into the model.							

PROFESSION : ARCHITECTS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	155	1	SD	0.051	0.051	2.461	8.349	.0044
EXTRINSIC JOB SAT.		1	SD	0.033	0.033	-1.151	5.193	.0240
AUTONOMIC JOB SAT.		1	AI	0.036	0.036	0.457	5.741	.0178

PROFESSION : ATTORNEYS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	97	1	SD	0.176	0.176	4.072	20.543	.0001
		2	LS	0.042	0.218	1.110	5.063	.0268
EXTRINSIC JOB SAT.		1	AI	0.125	0.125	6.871	13.658	.0004
		2	SD	0.049	0.174	3.208	5.651	.0194
AUTONOMIC JOB SAT.		1	AI	0.171	0.171	-0.744	19.817	.0001

PROFESSION : DENTISTS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	106	1	TF	0.077	0.077	8.607	8.728	.0039
		2	CC	0.042	0.119	5.486	5.001	.0275
EXTRINSIC JOB SAT.		1	TF	0.042	0.042	1.595	4.601	.0343
AUTONOMIC JOB SAT.	No variables met the .055 significance level for entry into the model.							

PROFESSION : DIETICIANS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	69	1	SD	0.211	0.211	1.058	18.174	.0001
EXTRINSIC JOB SAT.		1	SD	0.116	0.116	9.914	8.960	.0038
		2	M(-)	0.115	0.231	2.038	10.020	.0023
AUTONOMIC JOB SAT.		1	ENT	0.064	0.064	6.208	4.623	.0351
		2	SD	0.064	0.127	3.290	4.896	.0303
		3	C(-)	0.052	0.179	1.280	4.183	.0448

TABLE 37 Continued

PROFESSION : MEDICAL DOCTORS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	117	1	SD	0.123	0.123	4.981	16.249	.0001
		2	TF	0.030	0.155	2.584	4.413	.0378
EXTRINSIC JOB SAT.		1	ENT	0.034	0.034	6.579	4.114	.0448
		2	TF	0.033	0.067	4.484	4.043	.0467
AUTONOMIC JOB SAT.		1	ENT	0.047	0.047	5.722	5.663	.0190
		2	TF	0.033	0.079	3.647	4.052	.0465

PROFESSION : ENGINEERS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	179	1	TF	0.053	0.053	11.394	9.900	.0019
		2	M	0.038	0.091	5.879	7.395	.0072
		3	ENT(-)	0.026	0.117	2.696	5.221	.0235
EXTRINSIC JOB SAT.	No variables met the 0.55 significance level for entry into the model.							
AUTONOMIC JOB SAT.	No variables met the 0.55 significance level for entry into the model.							

PROFESSION : NURSES

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	112	1	SG	0.064	0.064	3.234	7.617	.0068
EXTRINSIC JOB SAT.		1	M(-)	0.075	0.075	1.558	9.015	.0033
AUTONOMIC JOB SAT.		1	M(-)	0.059	0.059	6.387	6.906	.0098
			TF	0.038	0.096	3.763	4.592	.0343

PROFESSION : PHARMACISTS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	139	1	SD	0.082	0.082	9.352	12.307	.0006
		2	AI(-)	0.060	0.142	1.865	9.566	.0024
		3	M	0.028	0.170	-0.518	4.530	.0350
EXTRINSIC JOB SAT.		1	SJ	0.064	0.064	4.132	9.474	.0025
AUTONOMIC JOB SAT.		1	SD	0.066	0.066	7.278	9.690	.0023
		2	M	0.028	0.094	4.985	4.232	.0416

PROFESSION : PHYSIOTHERAPISTS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	131	1	SD	0.053	0.053	6.223	7.310	.0078
		2	SJ(-)	0.040	0.093	2.559	5.683	.0186
		3	LS	0.035	0.129	-0.466	5.207	.0241
EXTRINSIC JOB SAT.		1	SJ(-)	0.046	0.046	-2.408	6.209	.0140
AUTONOMIC JOB SAT.		1	AI	0.056	0.056	10.412	7.656	.0065
		2	SJ(-)	0.039	0.094	6.760	5.492	.00206
		3	ENT	0.028	0.122	4.666	4.073	.0457
		4	(AI Removed)	0.026	0.097	6.417	3.732	.0556

TABLE 37 Continued

PROFESSION : PSYCHOLOGISTS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	108	1	M	0.108	0.108	15.604	12.888	.0005
		2	SD	0.068	0.175	8.474	8.682	.0040
		3	CC	0.040	0.214	5.041	5.379	.0223
		4	M					
			(Removed)	0.022	0.193	6.059	2.984	.0868
EXTRINSIC JOB SAT.		1	AI(-)	0.078	0.180	2.585	10.066	.0020
		3	SD	0.040	0.220	-0.584	5.405	.0220
AUTONOMIC JOB SAT.		1	TF	0.037	0.037	4.868	4.154	.0440
		2	M	0.052	0.098	0.982	6.000	.0159

PROFESSION : RADIOGRAPHERS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	119	1	SJ	0.118	0.118	8.351	15.751	.0001
		2	AI(-)	0.037	0.154	5.182	5.074	.0261
EXTRINSIC JOB SAT.		1	AI(-)	0.052	0.052	-2.438	6.499	.0121
AUTONOMIC JOB SAT.	No variables met the .055 significance level for entry into the model.							

PROFESSION : SOCIAL WORKERS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	149	1	TF	0.085	0.085	8.074	13.694	.0003
		2	SG	0.032	0.117	4.666	5.348	.0221
EXTRINSIC JOB SAT.		1	AI(-)	0.026	0.026	8.893	3.961	.0480
AUTONOMIC JOB SAT.	No variables met the .055 significance level for entry into the model.							

PROFESSION : VETERINARIANS

Dependent Variable	N	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
INTRINSIC JOB SAT.	191	1	SG	0.048	0.048	1.518	9.492	.0024
		2	M	0.022	0.069	-0.752	4.356	.0382
EXTRINSIC JOB SAT.		1	SG	0.047	0.047	12.280	9.447	.0024
		2	M	0.037	0.084	6.552	7.585	.0065
		3	AI(-)	0.019	0.103	4.490	4.051	.0456
AUTONOMIC JOB SAT.		1	SG	0.066	0.066	6.588	13.392	.0003
		2	ENT	0.043	0.109	-0.313	9.061	.0030

prediction should show a corresponding improvement. This argument proved correct as the results for these analyses were a great improvement on those for the total sample. This was particularly true for the prediction of intrinsic job satisfaction where eleven out of fourteen analyses returned prediction levels exceeding ten percent.

Also as suggested by theoretical considerations, these findings echoed those of the previous section in that the prediction levels for the intrinsic job satisfaction subscale were marginally higher than those for the overall job satisfaction scores for each profession. For the overall job satisfaction dependent variable only eight analyses returned R^2 values of about .10 and above, as opposed to the eleven models with R^2 values greater than .10 for the intrinsic job satisfaction variable. Again it seemed clear that personal values had a greater influence on the amount of intrinsic/content job satisfaction experienced than on extrinsic/context facets.

The results of the analyses summmarised in Table 37 will now be discussed for each profession in turn.

Accountants

The relative profile of accountants constructed in Chapter Nine reflected extremely high levels of satisfaction across all scales, and furthermore an extremely strong orientation towards Challenge/Competition.

This profile is supported by the regression analysis which indicated that over ten percent of their intrinsic job satisfaction may be related to the high value they placed on Challenge/Competition. This orientation will be reinforced and rewarded to the extent that the job provided an outlet in intrinsically challenging and competitive work - which the South African accountants' job apparently does.

The analysis of the extrinsic satisfaction of accountants showed the Managerial Competence and Technical/Functional Competence orientations to have the most significant influence. This was a somewhat surprising finding. As a profession they scored relatively highly on Managerial Competence (Figure 10), and this orientation may well result in them aspiring to and achieving managerial roles with concommitant desirable work environments. However, accountants scored extremely low on the Technical/Functional Competence orientation and this (following the results of this analysis) must lower their potential extrinsic satisfaction. This was an intriguing finding given the extremely high level of extrinsic satisfaction actually experienced.

Architects

The intrinsic and extrinsic satisfactions of architects appeared to be slightly correlated with the Service/Dedication orientation, while their autonomic satisfaction exhibited a similarly slight correlation with the Autonomy/Independence

orientation. Given the small R^2 values returned (a maximum of .051 representing just 5% common variance) these findings have little meaningful value. As suggested earlier it is possible that the most salient work values of architects were not measured by the Career Orientation Inventory.

Attorneys

A large proportion (about 22%) of the intrinsic satisfaction of attorneys could be predicted by means of their career orientations. Of that 22%, 17.6% could be related solely to the strength of their Service/Dedication orientation. This was a noteworthy finding considering the relatively low orientation towards Service/Dedication exhibited by attorneys as a whole (Figure 12). It would seem worthwhile to place greater stress on such values in legal faculties and in the cultures of legal firms. Such efforts may well be rewarded by greater intrinsic job satisfaction for attorneys. The profession also provides obvious opportunities for the exercise of social concerns and for service to others.

High levels of prediction (of about 17%) were also achieved for the dependent variables extrinsic and autonomic satisfaction. Both these variables were most strongly related to the Autonomy/Independence orientation - an orientation that was relatively strong among attorneys (Figure 12). The relationship between the Autonomy/Independence orientation and autonomic job satisfaction may be a double edged sword in that

where a sense of autonomy is a dominant value the level of autonomic satisfaction experienced is likely to be extreme - either extremely high, as in this case, or extremely low. Extrapolating from the discussion of the discrepancy and expectancies theories in Chapter Five, where a salient value is accommodated in the nature of the job (as appears to be the case for attorneys) it may be expected to yield far greater satisfaction than the realisation of a less important value would. (The converse of course is also true.) Surprisingly though, attorneys were the only profession where an orientation towards Autonomy/Independence was related to autonomic satisfaction.

Dentists

Dentists' intrinsic job satisfaction could be predicted to an extent (11.9%) by means of the Technical/Functional Competence and Challenge/Competition orientations. Dentists had average scores on both these variables and correspondingly average intrinsic satisfaction (Figure 13). Their exclusive orientation towards Autonomy/Independence did not enter into the equation. Possibly the restriction of the range of scores on this variable on which dentists tended to score extremely highly (Appendix E) reduced its potential to reach significance in the regression equation.

The extrinsic and autonomic satisfactions of dentists could not be predicted to a meaningful degree by means of

their career orientations. The only relationship to emerge was a weak one between extrinsic satisfaction and the Technical/Functional Competence orientation - both measures upon which dentists scored below average.

Dieticians

The satisfaction of dieticians (on all three scales but particularly on the intrinsic satisfaction scale) was strongly dependent on the strength of their Service/Dedication orientation. Twenty-one percent of the variance in intrinsic satisfaction, 12% of the variance in extrinsic satisfaction, and 6% of the variance in autonomic satisfaction was shared with the Service/Dedication orientation. Given the below average satisfaction experienced by these professionals and their average orientation towards Service/Dedication (Figure 14) this finding may be cause for some concern. If their professional training placed greater stress on this value orientation practising dieticians might well be more satisfied with their work.

Other variables to enter the equations were Managerial Competence (in an inverse relationship), Entrepreneurship and Challenge/Competition (also in an inverse relationship). Managerial Competence was inversely related to extrinsic job satisfaction. This inverse relationship was possibly the result of the limited scope for exercising managerial ambitions within this profession. Autonomic satisfaction was

positively related to Entrepreneurship which may have been expected - entrepreneurially orientated people are more likely to undertake activities which free them from the constraints of organisational life. Autonomic satisfaction was also negatively related to the Challenge/Competition factor. Possibly this negative relationship indicateed (as with the inverse relationship between the managerial orientation and extrinsic satisfaction), that the profession offered limited challenge and competition.

Medical Doctors

Up to 15.5% of the intrinsic job satisfaction of medical doctors could be predicted by a model comprised of the Service/Dedication and Technical/Functional Competence orientations. This seemed to make sense considering that a doctor's job is to provide a highly skilled service in accordance with rigid ethical values formally espoused in terms of the Hippocratic Oath. He/she was then satisfied to the extent that his/her values were compatible with these job demands.

The value orientations conducive to the extrinsic and autonomic satisfaction of doctors were the same - firstly, Entrepreneurship and secondly, Technical/Functional Competence. The realities of private practice for medical doctors allows some leeway for the exercising of

entrepreneurial talent. The more entrepreneurially orientated medical doctors were likely to make more of these opportunities and consequently reap more extrinsic rewards (more money, more attractive consulting rooms and so on) and also gain more control and autonomy over their lives. This explains the positive relationships between extrinsic and autonomic job satisfaction on the one hand and the Entrepreneurial orientation on the other.

Engineers

Engineers experienced a low level of intrinsic job satisfaction relative to other professions. This is no longer surprising as the variable which was most closely correlated with intrinsic satisfaction - Technical/Functional Competence - was a variable in terms of which engineers scored lower than any other profession surveyed. Clearly, and in support of Rynes, Tolbert and Strausser (1988), too many people are entering the engineering profession with the intention to further their careers in managerial directions or are evolving values in that direction. The cluster of work values engineers exhibit (labelled earlier as that of the corporate climber) would tend to render their technical/functional skills meaningless which would then have negative consequences for their intrinsic job satisfaction. Engineers and career advisors who sell engineering as an entree into management

(which appears to be a common perception) may thus be doing the profession and the people who enter it a great disservice.

The extrinsic and autonomic job satisfaction of engineers could not be predicted to any statistically significant degree.

Nurses

The intrinsic job satisfaction of nurses could not be predicted to any great degree. The Geographic Security orientation shared approximately 6.4% common variance with that variable. Why Geographic Security should be related to intrinsic satisfaction was a perplexing question. From earlier analyses it might be concluded that nursing offered relatively little satisfaction, with security (both job and geographic) representing one of the few benefits. However, the Security variables would be expected to correlate with extrinsic rather than intrinsic satisfaction. The converse interpretation of the correlation - that intrinsic satisfaction leads to a concern for security - seems implausible considering the extremely low level of satisfaction experienced by nurses.

A negative relationship with the Managerial Competence orientation was strongly evident in the regression models for both extrinsic and autonomic satisfaction. The value profile of nurses (Figure 17) indicated an extremely strong orientation towards Managerial Competence and the negative

correlation between this orientation and their job satisfaction must indicate that their ambitions in this regard are being stifled. Their extremely low reported autonomic satisfaction would support this assumption - even if they reach positions of responsibility they are not given sufficient authority to manage their resources independently. The more satisfied nurses according to this equation do not value leadership roles and concommitant responsibilities. The danger indicated by this finding is that potentially competent senior nurses and matrons may become demoralised enough to leave the profession altogether because their needs are being frustrated.

This problem will have to be addressed, either by ensuring that the work and working conditions of nurses become more rewarding (intrinsically and extrinsically) or that the structure of the profession changes to allow more nurses to rise to managerial roles and that they be given the independence to manage effectively. The dangers inherent in maintaining the status quo have already been mentioned ("Shortage of", 1990; "Overworked, underpaid", 1990; Scorpio, 1989).

Pharmacists

The extremely low level of intrinsic job satisfaction experienced by pharmacists was reported earlier and was explained by their low level of skill utilization

(Humphrys & O'Brien, 1986). It would appear from the present analysis, however, that their low satisfaction may be moderated by appropriate value orientations. A high orientation towards Service/Dedication and Managerial Competence, combined with a low value on Autonomy/ Independence, may well compensate for the low utilisation of the traditional pharmacy skills. Aspiring pharmacists may be advised to seek satisfaction from running a small business and providing a service rather than from the exercise of their highly developed skills. Nevertheless, this scenario represents a sad waste of talent.

The extrinsic job satisfaction of pharmacists was most significantly related to the strength of their orientation towards Job Security. This meant that pharmacists who had a greater need for job security were also more satisfied with extrinsic aspects of their jobs. The implication was that this sample of pharmacists (who, in the 30-44 year age range, may be assumed to be at the peak of their careers) consider their jobs to be fairly secure. Thus, if security was a salient need it may also have been a source of extrinsic satisfaction.

The autonomic satisfaction of pharmacists corresponded to the strength of their orientations towards firstly Service/Dedication and secondly, to a lesser extent, Managerial Competence. The nature of pharmacists' work clearly involved providing a service and managing that service in that many pharmacists ran their own pharmacy and employed staff, controlled inventories, coordinated point-of-sale

marketing and so on. It was likely then that pharmacists who experience work autonomy did so because they were doing what they want to do anyway - that was to be of service and to exercise managerial functions. The distinction here is a subtle but important one - that the experience of autonomy lies not only in an objective span of control (being able to choose what one wants to do, how and with whom) but also in the compatability between one's salient values and the nature of the work performed. This fascinating distinction will be elaborated upon later in this chapter.

Physiotherapists

Physiotherapists reported the highest level of intrinsic job satisfaction of all the professions sampled. Only 12.9% of that satisfaction could be explained by the present analysis, and physiotherapists remain an intriguing group for further study. Of the value orientations measured, a high orientation towards Service/Dedication and Lifestyle Integration and a low concern for Job Security were correlated significantly and independently with intrinsic satisfaction. Turning to the job characteristics model of intrinsic satisfaction (Figure 5) it seemed likely that physiotherapists find their work meaningful and that they experienced autonomy and received sufficient positive feedback. The model in Figure 5 also emphasises the role of work-related values in shaping intrinsic satisfaction, and it is consequently

noteworthy that the orientations that were related to intrinsic satisfaction in the regression analyses (Table 37) are also the orientations upon which physiotherapists scored particularly highly (see Figure 19). Nevertheless, only 12,9% of physiotherapists' intrinsic satisfaction could be accounted for in the present analysis. Given their extremely high scores on this measure, further research involving physiotherapists seems warranted as it may provide greater insight into the nature and cause of intrinsic job satisfaction.

The extrinsic satisfaction of physiotherapists demonstrated an inverse relationship with the Job Security orientation. This seemed to indicate that their job provided relatively little security (in contrast to pharmacy for example) and consequently, if security was an important concern to an individual they would be dissatisfied with this extrinsic aspect of the physiotherapists' work.

The autonomic satisfaction of physiotherapists appeared to be related to a model consisting of the Job Security (in an inverse relationship) and Entrepreneurial orientations. The Autonomy/Independence orientation entered the model initially but was removed when the common variance shared between this and the Job Security and Entrepreneurial orientations was partialled out, rendering the unique contribution of the Autonomy/Independence variable insignificant. The opportunities available for physiotherapists to go into private practice were more likely to be exploited by physiotherapists who had an entrepreneurial bent and were

willing to take the risks inherent in opening one's own practice. Physiotherapists in private practice were also likely to experience greater autonomy than those working for an employing organisation. This may explain the observed relationship between the Entrepreneurial and Job Security (inversely) orientations and the autonomic satisfaction of pharmacists.

Psychologists

Over 19% of the intrinsic job satisfaction of psychologists could be determined by only two orientations - Challenge/Competition and Service/Dedication. Managerial competence entered initially, but its unique contribution was reduced to insignificance following the introduction of the Challenge/Competition variable and the Managerial Competence variable was subsequently removed from the model. This was due to the high intercorrelation between the Managerial Competence and Challenge/Competition factors. After partialling out this intercorrelation, the Managerial Competence measure had much less unique variance to contribute.

The entry of both the Challenge/Competition and Service/Dedication orientations may once again be reconciled in terms of a socialised power motive (McClelland, 1975). Thus these orientations may have been expressed in the context of influencing people to overcome their own limitations.

People who were high on both the Service/Dedication and Challenge/Competition orientations may have found the practice of psychology to be a favourable environment for the satisfaction of both of these potentially conflicting orientations.

The extrinsic satisfaction of psychologists could be predicted to a high degree (about 22%) by a model consisting of the Challenge/Competition, Autonomy/Independence (in an inverse relationship) and Service/Dedication orientations. Apparently these values/motivations may result in improved extrinsic rewards which in turn may lead to greater intrinsic satisfaction. This seems plausible as an orientation towards addressing and overcoming obstacles and challenges balanced by a concern to serve people may well make a successful psychologist.

The autonomic satisfaction of psychologists was related to their Technical/Functional Competence and Managerial Competence orientations. Again these salient value clusters would be highly compatible with the work of psychologists. Their work is technically complex and sophisticated but at the same time it had the managerial components of influencing and controlling people and interactions. Once again the component of autonomic satisfaction identified earlier - being able to do what you want to do anyway - independent of objective criteria of autonomy was revealed.

Radiographers

Up to 15.4% of the intrinsic job satisfaction of radiographers could be predicted with reference to the Job Security and Autonomy/Independence (in an inverse relationship) orientations. The Job Security orientation made by far the greatest contribution. It was an odd finding that the Job Security orientation was related to intrinsic satisfaction as security is an extrinsic job facet. Two possible explanations may be suggested. Firstly, it is possible that the experience of intrinsic satisfaction actually leads to greater concern for Job Security (in order to maintain the intrinsic satisfaction) rather than the reverse.

Secondly, it is also possible, given radiographers' extreme concern for Job and Geographic Security (Figure 21), that where these values were fulfilled essentially extrinsic satisfaction may have spilled over into the intrinsic satisfaction experienced. Mitigating against this interpretation however was the fact that neither of the Security orientations entered the model predicting extrinsic job satisfaction!

The only career orientation entering the model predicting extrinsic satisfaction was the Autonomy/Independence orientation, sharing an inverse relationship with the dependent variable.

The negative relationship between the Autonomy/Independence orientation and both the extrinsic and intrinsic satisfaction experienced by radiographers would seem to reflect a profession where following directions rather than taking initiative was rewarded. Clearly the profession did not accommodate people for whom autonomy and independence were important values. If radiographers were allowed to go into private practice this situation might be reversed and their low extrinsic and autonomic satisfaction may be improved (Figure 21). There is also evidence that managed health care workers suffer lower satisfaction and are more prone to burnout than fee-for-service practitioners (Snibbe, Radcliffe, Weisberger, Richards & Kelly, 1989).

The autonomic satisfaction of radiographers could not be predicted to a significant level.

Social Workers

About 12% of the intrinsic job satisfaction of social workers could be explained by the strength of their orientations towards Technical/Functional Competence (in particular) and to a lesser extent towards Geographic Security.

According to the profile in Figure 22, social workers exhibited an above average orientation towards Technical/Functional Competence and a strong orientation towards Geographic Security. According to the regression

model this should be reflected in above average levels of intrinsic satisfaction which was not the case. Obviously only a limited amount of the variance in the intrinsic job satisfaction of social workers could be explained through the career orientations measured. Other components of intrinsic satisfaction such as autonomy and feedback may be lacking in their jobs and may have a greater influence on their scores.

Similarly to radiographers the extrinsic satisfaction of social workers was only related to the Autonomy/Independence orientation (inversely) - and then only to a small degree (R^2 = .03). This would support the suggestion that their jobs lack autonomy.

The autonomic satisfaction of social workers could not be predicted to any statistically significant level.

Veterinarians

Only a minor level of the intrinsic job satisfaction of veterinarians could be predicted by the career orientations measured. The Geographic Security and Managerial Competence variables entered the equation, but the level of prediction reached was only 6.9%. Veterinarians reported very low intrinsic satisfaction and average scores on most of the career orientations measured. Consequently veterinarians must remain something of an enigma as far as their dominant values and sources of intrinsic satisfaction are concerned.

The extrinsic and autonomic satisfaction of veterinarians could be predicted to a slightly better extent (up to 11%). The Geographic Security orientation entered both equations strongly. Veterinarians were possibly more aware of their environment than other professionals (given their involvement in farming communities and so on). Where this awareness was linked to salient values concerning Geographic Security, satisfaction may have resulted to the extent that their jobs provided such security. Managerial competence was the next strongest predictor of extrinsic satisfaction and conceivably an orientation towards managerial functions may have led to better management practices and consequently to greater extrinsic rewards.

Along with Geographic Security, the extrinsic satisfaction of veterinarians was also related to the Entrepreneurship anchor. Following the theme regarding extrinsic satisfaction developed throughout this section it seemed reasonable to assume that these were the orientations most compatible with the effective practice of veterinary surgery.

Summary of the Analyses of Intrinsic, Extrinsic and Autonomic Job Satisfaction

A number of trends can be extracted from the foregoing discussion that throw some light on the nature of the

satisfaction variables examined. These will be discussed for each dependent variable in turn.

Intrinsic Job Satisfaction

Of the satisfaction factors measured, the nature of intrinsic satisfaction remains the most elusive. The values that promote intrinsic satisfaction vary from profession to profession with no common trend or obvious link to the nature of the work performed readily apparent. The regression analyses imply that value orientations may be an important moderating factor in the intrinsic satisfaction experienced by professionals and for each profession the most important values in this regard and the strength of their contribution have been identified. However, from the present data, it does not seem possible to construct a generalised model of intrinsic satisfaction.

What is obvious from the analyses reported, however, is that value orientations do influence the experience of intrinsic satisfaction. It is likely, extrapolating from the improvement in results for each profession as opposed to results for the total sample, that the orientations are not so much directly related to intrinsic satisfaction but rather that intrinsic satisfaction results from the interaction between value orientations and environmental factors.

As expected, value orientations were more strongly related to intrinsic job satisfaction than to extrinsic

satisfaction. Extrinsic satisfaction may be determined by objective criteria such as pay (Bokemeier & Lacy, 1986; Hackman & Lawler, 1971; Locke, 1983; Lottinville & Scherman, 1988; Savery, 1989a, 1989b), and working conditions (Locke, 1983), which in turn meet lower order existence needs which in broad terms are common to everyone. On the other hand the components of intrinsic satisfaction (Figure 5) were not desired to the same degree by different people. Intrinsic satisfaction was thus more strongly affected by individual value orientations.

Extrinsic Job Satisfaction

Once again it was shown that value orientations may have a significant moderating effect over the amount of extrinsic job satisfaction experienced by the professionals surveyed. Furthermore, those value orientations assumed to have the strongest influence (and the extent of that influence) were identified for each profession. Although there was some correlation, possibly due to the emotional spillover effect (Locke, 1983), these value orientations were not necessarily the same as those that affected the level of intrinsic satisfaction experienced.

The nature of extrinsic satisfaction was far less illusive than that of intrinsic satisfaction. Extrinsic satisfaction is related to concrete rewards (such as pay and working conditions) and may be assumed to have common sources

across the different professions. Consequently it appears that those values most likely to increase one's effectiveness in each profession (and lead to greater extrinsic rewards) were those most closely associated with extrinsic job satisfaction. Thus for example a medical doctor who may have been expected to maximise his/her extrinsic returns would have had (in almost equal parts) strong orientations towards Entrepreneurship and Technical/Functional Competence. Similarly, a radiographer who was not strongly independent may have been more highly valued - and more highly rewarded - by his/her employer than one who valued his/her independence more.

Autonomic Job Satisfaction

The study of this job satisfaction factor proved most enlightening. From the comparisons across professions reported in Chapter Nine, and from the analyses within professions documented in the present chapter, autonomic job satisfaction appears to have two components.

The first component is an "objective" component related to the amount of autonomy and independence actually permissible in terms of the nature of the work performed. That is the amount of control the person actually has over such variables as who he/she may work with, how the work will be done, how much will be charged for the work, what hours will be worked and so on. For example, by these criteria a

nurse has less "objective" autonomy than an attorney or an architect.

The second component was illuminated by the regression analyses. That is that the amount of autonomic satisfaction experienced or felt, was further determined by a compatibility between peoples' values and the nature of the work they performed. While it was originally hypothesized that this would be the case for satisfaction generally the relationship was plainly evident for the autonomic satisfaction factor only. The experience of autonomic satisfaction was thus related not only to actual job autonomy but also to whether or not a person is doing work he/she valued anyway (however structured and controlled it may have been).

To elaborate on this fascinating distinction, it may be useful to contrast two professions that objectively appeared to be far removed from each other in terms of the amount of autonomy members have. (Autonomy in the sense of being able to choose what to do and when and how to do it.) These professions are nursing and architecture.

Nurses work in an environment characterised by bureaucratic rules and procedures and a rigid authority structure. By contrast 65% of the architects sampled were self-employed or in partnerships and thus to some extent, could choose clients, projects and work hours, and of course, by the nature of their work, exercise creativity. Objectively then, a simplistic view of autonomic satisfaction would suggest that nurses would have relatively little and

architects a great deal. Indeed, there was a significant difference between the two professions overall on this variable. But this view begs the question, given the scenarios sketched, why do some nurses actually experience high autonomic job satisfaction and some architects little?

The regression analyses provided clues to the answer. From Table 37, the autonomic satisfaction of nurses was negatively related to their Managerial Competence orienation and positively related to their Technical/Functional Competence orientation. Evidently then, nurses who valued their technical skills but had no managerial ambitions experienced autonomy in their work. The point is that, objectively these nurses had as little actual autonomy as any other nurse but because the nature of their work was compatible with their salient values they felt satisfied with the autonomy their job allowed. Similarly from Table 37, the autonomic satisfaction of architects was related to their orientation towards Autonomy/Independence. Consequently, an architect who did not value Autonomy/Independence would not feel satisfied with his/her job autonomy despite the fact that he/she actually had a great deal of autonomy.

Collin and Young (1986) called for an hermeneutic approach to the study of careers. The above discussion may be an endorsement of their approach. That is, by focusing on the meaning individuals attach to autonomy a great deal of insight into the nature of autonomic satisfaction was provided.

Conclusion

The conclusion to this chapter is designed to sum up the implications of the results that have been documented as regards the research hypothesis under examination.

Firstly though, a general observation needs to be made. The observation draws on the value profiles constructed in the previous chapter and on the results of the analyses documented in this chapter. What became apparent was that the dominant values held by members of the various professions were not necessarily those which would bring them maximum satisfaction. For example, the satisfaction of psychologists (across all scales) corresponded strongly with either the Managerial Competence or Challenge/Competition orientations - neither of which were even averagely strong value orientations among psychologists. Similarly, dieticians may have benefited from a stronger orientation towards Service/Dedication and so on.

The implications are that the values appropriate to the work of the various professions may be misrepresented or misunderstood by career advisors and possibly the professionals themselves. The data contained in this report could go some way to relieving this problem. For the present the onus lies with the managers of professional people and with the professionals themselves to structure their work and rewards systems in accordance with their dominant values. For the future the challenge lies in channeling people into the professions for which their value systems are most appropriate

in terms of their likely job satisfaction, rather than into a profession where their value systems simply match those of people already employed in that profession.

As regards the first research hypothesis, the central thesis was not supported. The results of the multiple regression analyses showed that job satisfaction could not be predicted by means of one dominant career orientation. Furthermore, the results of both this and the previous chapter tended to support an hierarchical model of value orientations rather than a model dominated by a single orientation. This result is in accord with the findings of Ravlin and Meglino (1989) and the approach adopted by Holland (1985) among others.

In line with Schein's (1985) theory, however, the analyses did show, firstly, that values (in combination or as a hierarchy of values) do exert a significant influence on the amount of job satisfaction experienced. Secondly, the analyses confirmed that the values which were most strongly related to job satisfaction do differ from profession to profession. These relationships, as expected, were most evident for intrinsic rather than extrinsic facets of job satisfaction. An approach to career counselling that emphasizes the interaction between personality and environmental factors would therefore seem indicated. This approach is in contrast to the traditional trait and factor approaches which attempt to simply match personal and environmental factors.

CHAPTER 11

PREDICTION OF JOB INVOLVEMENT BY MEANS OF CAREER ORIENTATIONS

The multiple regression analyses to be documented in this chapter yielded the most exciting results of all the analyses in the study. They were performed to test the second research hypothesis:

> "The job involvement of members of a professional group may be predicted by means of a career orientation."

The analyses regressing career orientations onto job involvement were performed as for the satisfaction dependent variables and will also be reported using tables similar to those in the previous chapter. Initially a regression analysis was performed using the entire sample as subjects and then separate analyses were performed for each profession in turn.

Prediction of the Job Involvement of the Entire Sample

The results of the stepwise regression procedure for the total group (N=1785) are reported in Table 38.

A full 27% of the variance in job involvement could be explained by means of career orientations. Of this percentage,

TABLE 38: Summary of the Stepwise Regression Analysis for the Dependent Variable Job Involvement Based on the Entire Professional Sample (N=1785).

Step	Variable	Partial R^2	Model R^2	C(p)	F	Prob>F
1	CC	0.176	0.176	226.082	381.692	.0001
2	TF	0.056	0.232	92.894	128.699	.0001
3	ENT	0.013	0.244	64.437	29.468	.0001
4	SD	0.009	0.253	44.690	21.272	.0001
5	LS(-)	0.018	0.266	16.337	30.178	.0001
6	AI(-)	0.008	0.268	12.173	6.146	.0133
7	SJ(-)	0.003	0.271	7.234	6.942	.0085

Notes:

1. The Lifestyle/Integration, Autonomy/Independence and Job Security orientations are inversely related to the dependent variable. This is indicated by the minus signs in brackets, although obviously a squared partial R value cannot be negative.

2. The C(p) value at the seventh step (7.23) indicated a fairly good linear model. The ideal in this case would be a C(p) value of 8.

the Challenge/Competition orientation accounted for the greatest proportion (17,6%) with the Technical/Functional Competence orientation contributing 5,6% and the remaining five variables in the model a mere 4% altogether.

Overall then, an orientation towards challenging work and a competitive environment would seem to result in greater job involvement. Once again though the correlational nature of the study must be stressed. It is quite conceivable that the opposite relationship is true - that high job involvement fosters more competitive and challenge orientated values and motives. The alternative interpretations would then be as follows.

A strong Challenge/Competition orientation leads to job involvement. Here the likelihood is that an orientation towards more challenging work and competition would result in greater achievement, overcoming obstacles, learning new responses and confirming one's abilities. In short this orientation is probably the most growth enhancing and it is that realisation of psychological growth and potential for psychological growth that binds people with the Challege/Competition orientation so strongly to their job.

Similarly, Locke (1983) argued that challenge stimulates involvement (if the challenge is sufficiently great and is accepted) because it requires the exercise of individual judgement and choice. Essentially, a person who accepts a

challenge becomes a causal agent. Subsequently, actions and outcomes for which one takes personal responsibility would (according to Locke) produce greater affect than those for which one is not responsible because more of oneself (and one's self-esteem) is involved in the job. Hall's (1971) general model of involvement would also support this conjecture.

Job involvement leads to a strong Challenge/Competition orientation. If a person identifies psychologically with his/her work it is probable that success on the job becomes more important as it then reflects directly on him or her as a person. If his/her identity is then so strongly tied to work, greater and greater challenges (in technical or interpersonal terms) are sought, and each new win or achievement confirms or enhances that self-image. Alternatively not overcoming an obstacle or not winning an interpersonal battle is a loss that, because of his/her strong identification with work, may be internalised to devastating effect. The working world therefore becomes a zero sum game - great value is attached to winning, great pain to losing and the middle ground becomes relatively meaningless.

Both interpretations seem plausible and it is possible that both hold true and give rise to a circular process whereby each variable is both a cause and an effect of the other. That scenario is represented in Figure 24.

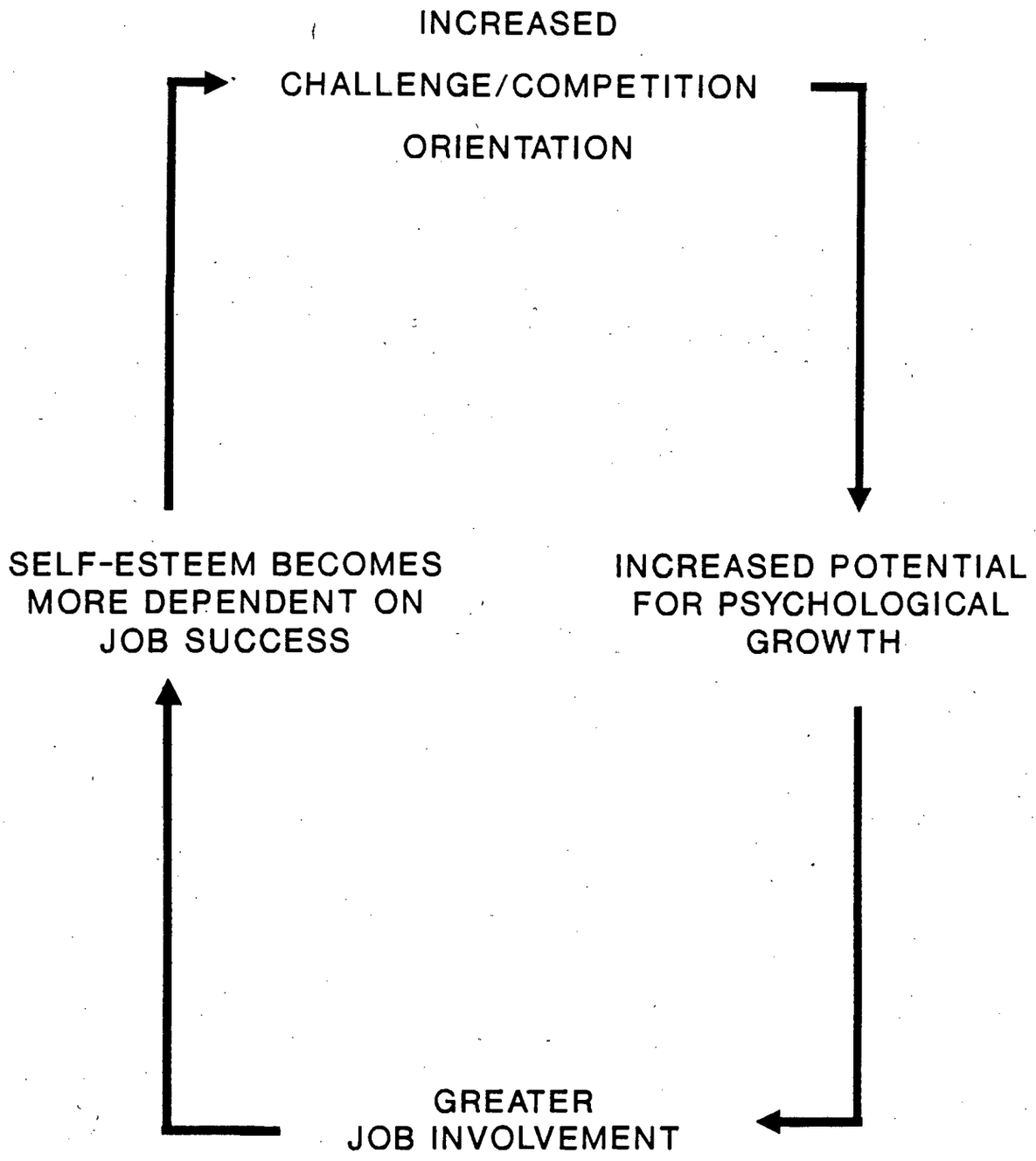

Figure 24 Hypothesized relationship between the Challenge/Competition orientation and job involvement.

Hall (1976) has proposed a similar model describing the development of career involvement (a similar construct to job involvement). Central to his conceptualisation is Lewin's (1936) concept of psychological success. According to Lewin, a sense of psychological success may be achieved when

- a person sets a challenging goal for him/herself
- he/she determines means of attaining the goal
- the goal is important to his/her self-concept (is valued)
- the goal is attained (Lewin, 1936).

Lewin's definition of psychological success is thus, similar to the definition of psychological growth adopted for the present study from Schein (1977b). Furthermore, the relationship between challenging goals and self-esteem is similarly represented in both Hall's (1976) model of career involvement and the present model of job involvement. Where the model in Figure 24 differs from Hall's model is in the emphasis on <u>potential</u> for growth leading to greater involvement. It is this author's contention that the achievement of growth leads directly to job satisfaction (in particular intrinsic satisfaction) rather than job involvement. However, the potential for growth and increased self-esteem binds a person to his/her job resulting in increased job involvement (as depicted in Figure 24).

Technical/Functional Competence was the second best predictor of job involvement for the general population of professionals. Obviously if one places a high value on being proficient at work the job becomes a more important component of one's identity. Furthermore, greater involvement in the work may be necessary to facilitate the development of greater competence in the work. Hall (1976) has developed similar propositions in describing the job choice process.

The regression analysis relating the Challenge/Competition and Technical/Functional Competence orientations to job involvement may also go some way towards explaining the relationships between job involvement and job performance which have been reported (e.g. Hall & Lawler, 1970; Meyer, Paunonen, Gellatly, Goffin & Jackson, 1989; Rabinowitz & Hall, 1977; Rabinowitz, 1985). It is quite likely that an orientation towards challenge and Technical/Functional Competence may enhance job performance. In particular, the model in Figure 24 details how the Challenge/Competition orientation may lead to greater concern for job success.

Prediction of the Job Involvement of Each Profession

The stepwise regression procedure was repeated for each profession in turn. These results are summarised in Table 39.

These results support the research hypothesis in that for almost every profession there was a single career orientation

TABLE 39: Summary of the Stepwise Regression Analyses for the Dependent Variable Job Involvement for Each Professional Group.

Prof	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
Acc	1	CC	0.290	0.290	18.249	40.069	.0001
	2	TF	0.063	0.353	10.096	9.461	.0027
	3	LS(-)	0.040	0.394	5.612	6.377	.0132
	4	SD	0.034	0.427	2.175	5.604	.0199
Arc	1	CC	0.199	0.199	35.467	38.240	.0001
	2	TF	0.070	0.269	20.997	14.736	.0002
	3	SD	0.026	0.296	16.822	5.694	.0183
	4	LS(-)	0.031	0.327	11.474	7.047	.0088
	5	ENT	0.022	0.349	8.411	4.983	.0271
	6	M(-)	0.019	0.367	6.068	4.371	.0282
Att	1	CC	0.155	0.155	13.249	17.554	.0001
	2	SD	0.039	0.198	10.342	4.556	.0354
	3	LS(-)	0.043	0.237	6.852	5.328	.0232
	4	TF	0.037	0.278	4.179	4.715	.0324
Dent	1	CC	0.170	0.170	15.676	21.430	.0001
	2	TF	0.095	0.264	4.140	13.390	.0004
Diet	1	SD	0.029	0.029	15.426	27.531	.0001
	2	CC	0.121	0.410	3.536	13.780	.0004

TABLE 39 Continued

Prof	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
Doc	1	SD	0.196	0.196	29.886	28.221	.0001
	2	TF	0.076	0.271	18.343	11.949	.0008
	3	LS(-)	0.067	0.338	8.429	11.468	.0010
	4	CC	0.027	0.365	5.558	4.847	.0297
Eng	1	CC	0.099	0.099	10.128	19.457	.0001
	2	SD	0.118	0.118	8.207	3.809	.0525
	3	ENT	0.019	0.135	6.351	3.805	.0527
	4	TF	0.019	0.155	4.499	3.863	.0509
Nurs	1	CC	0.234	0.234	9.262	33.891	.0001
	2	AI(-)	0.051	0.285	3.328	7.019	.0058
	3	SJ	0.028	0.314	0.940	4.515	.0359
Phar	1	CC	0.219	0.219	31.104	38.647	.0001
	2	AI(-)	0.084	0.302	15.222	16.418	.0001
	2	TF	0.049	0.352	6.662	10.356	.0016
Phys	1	CC	0.157	0.157	26.433	24.124	.0001
	2	TF	0.099	0.256	10.234	17.232	.0001

TABLE 39 Continued

Prof	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
Psy	1	CC	0.171	0.171	25.516	22.092	.0001
	2	TF	0.115	0.286	9.465	17.014	.0001
	3	M	0.039	0.324	5.894	5.991	.0160
	4	SG(-)	0.030	0.354	2.655	4.849	.0299
Rad	1	CC	0.219	0.219	3.762	33.292	.0001
	2	TF	0.038	0.256	-0.047	5.963	.0161
Soc	1	CC	0.228	0.228	27.943	43.616	.0001
	2	TF	0.079	0.307	12.125	16.777	.0001
	3	SD	0.045	0.352	3.917	10.213	.0017
	4	ENT	0.021	0.373	1.212	4.832	.0295
Vet	1	ENT	0.111	0.111	30.167	23.648	.0001
	2	SG	0.055	0.165	18.809	12.328	.0006
	3	CC	0.031	0.196	13.248	7.207	.0079
	4	LS(-)	0.031	0.227	7.698	7.443	.0070
	5	TF	0.018	0.244	5.373	4.340	.0386

that would account for a great deal of the variance in job involvement for that profession. However, the support must be qualified in that various other orientations entered each model, for the most part with greatly diminished influence. The levels of prediction reached in many cases were remarkable - in two analyses (involving accountants and dieticians) the prediction level was greater than 40%. Given the limitations of psychometric instruments and the limited control over extraneous variables that is possible in correlational research such results are extraordinary. Such high correlations were unprecedented in the published research that was reviewed. Thus, while Schein's (1985) interpretation of the career orientations leading to satisfaction was not strongly evidenced in the present research, his observations of an "anchored" person from which the second hypothesis was extrapolated seem accurate. As suggested in Chapter Six, it is thus likely that the anchor metaphor is analogous to the description of a job involved person.

Looking more closely at the regression models, the most frequent model resembles that for the entire sample. Challenge/Competition made the predominant contribution, followed by Technical/Functional Competence. Any further variables in the model added little to the prediction. Professions following that pattern were accountants, architects, dentists, physiotherapists, psychologists and social workers. It is noteworthy that the

Challenge/Competition variable entered all fourteen models at some stage.

The similarity of the models over the various professions suggests again that job involvement is more an individual difference variable than a product of the work environment (as proposed by Hackman (1976), Hall (1971) and Hall, Goodale, Rabinowitz & Morgan (1978) for example) or of the interaction between personal and environmental variables (Misra & Kalro, 1981; Kanungo, 1982; and Blau, 1987).

A further five professions had Challenge/Competition remaining as the primary predictor of job involvement but with other secondary predictors - either the Service/Dedication or Autonomy/Independence orientations (Autonomy/Independence in an inverse relationship with involvement).

Attorneys, engineers and radiographers had Service/Dedication entering the model after challenge/ competition. As with the Challenge/Competition, Technical/ Functional Competence model, the Challenge/Competition variable proved the greatest contributor to the variance explained. Challenge/Competition accounted for up to 86% of the variance explained by the entire model. The Service/Dedication orientation may also enter the equation due to its effect on one's psychological identity. Possibly such an orientation would result in a positive sense of identity and if achieved through the work role would result in a strengthened involvement in the job.

Nurses and pharmacists had Autonomy/Independence making an inverse contribution to the model after the predominant Challenge/Competition orientation. It is not inconceivable that a high desire for autonomy could be incompatible with a strong sense of job involvement - particularly where the job allows little autonomy. It is clear from the low autonomic satisfaction of both nurses and pharmacists that this is the case within their professions.

The remaining models were those for medical doctors and veterinarians. Service/Dedication was the primary contributor to the model predicting medical doctor's involvement, followed by Technical/Functional Competence. Medicine is clearly a service oriented profession and it was thus not surprising that medical doctors who were not service orientated would be somewhat alienated from their job.

Veterinarians returned the most unusual model as neither the Challenge/Competition nor Technical/Functional Competence orientations were among the first two entrants to the model. For veterinarians the strongest predictors of job involvement were Entrepreneurship (at 11.1%) and Geographic Security (at 5.5%). Entrepreneurship is correlated with Challenge/Competition and is probably related to job involvement for similar reasons. That is that entrepreneurial endeavours will enhance or offer the possibility of psychological growth - a potential that would serve to keep one involved in one's job. The entry of geographic security

into the model is an unusual one. Possibly for veterinarians, who may be closely involved with farming, their community and land may be an important component of their psychological identity. This identification with the land would then be facilitated by the exercise of their profession, leading to involvement in the job itself.

Prediction of Job Involvement by means of Career Orientations and the Job Satisfaction Factors

The success of the multiple regression analyses predicting job involvement by means of career orientations stand in contrast to the relatively poor prediction of job satisfaction by means of career orientations. The fact that career orientations were relatively poorly correlated with job satisfaction, allied to the fact that job satisfaction is known to correlate to some extent with job involvement (Hall, Goodale, Rabinowitz & Morgan, 1978; Knoop, 1986; Meyer, Paunonen, Gellatly, Goffin & Jackson, 1989 and Rabinowitz & Hall, 1977), suggested an analysis that had not been considered in the original research design. That was to regress both the career orientations and the job satisfaction factors onto the dependent variable, job involvement.

This appeared to be an attractive proposition for two reasons. Firstly, the fact that the independent variables (job satisfaction and the career orientations) are relatively

unrelated to each other but correlate independently with the dependent variable (job involvement) represents the ideal circumstances in which to perform a multiple regression analysis (Kerlinger, 1973). Secondly, from a more theoretical point of view, the proposed analysis would provide an opportunity to address an area of some controversy within the job involvement literature. That is whether job involvement is situationally determined or an individual difference variable (see Rabinowitz & Hall, 1977). The career orientations represent individual difference variables in that they are measures of individual values, and motives. Job satisfaction, on the other hand, is primarily situationally determined (see Chapter Five) and thus represents an indirect control for situational variables. That this is the case is further indicated by Knoop (1986) who showed that the relationship between job involvement and job satisfaction could be reduced to insignificance by controlling for situational variables.

The following analyses were consequently performed:

-- the career orientations and overall satisfaction were regressed onto job involvement for the total sample;
-- the above analysis was repeated for each profession separately;
-- the career orientations and the three factor-derived satisfaction scales (extrinsic, intrinsic and autonomic satisfaction) were regressed onto job involvement for the total sample;

-- and the third analysis above was repeated for each profession separately.

In most of those analyses the level of prediction of the dependent variable job involvement was improved. The greatest improvements were registered where the factor derived satisfaction scales were included in the analyses. To keep this report as concise as possible, only those analyses in which the factor derived satisfaction scales were included will be presented, as they proved the most illuminating. Three of the analyses within professions did not result in improved predictions of the dependent variable and consequently these analyses - for dentists, nurses and physiotherapists - will not be presented.

Prediction of Job Involvement by means of Career Orientations and Job Satisfaction Factors - Total Sample

The results of this analysis is summarised in Table 40. All three job satisfaction factors entered the equation and improved the prediction from the 27.1% reported in Table 38 to 30.7%. The Challenge/Competition and Technical/Functional Competence orientations remained by far the strongest predictors with the intrinsic satisfaction variable usurping the third spot, sharing over 3% of the unique variance in the independent variable.

TABLE 40: Summary of the Stepwise Regression of the Career Orientation and Job Satisfaction Factors onto the Dependent Variable Job Involvement for the Total Sample (N=1785).

Step	Variable	Partial R^2	Model R^2	C (p)	F	PROB F
1	CC	0.176	0.176	333.087	380.930	.0001
2	TF	0.055	0.231	193.054	128.345	.0001
3	INT JS	0.033	0.264	110.501	79.782	.0001
4	ENT	0.014	0.279	75.886	35.212	.0001
5	LS	0.011	0.289	50.722	26.499	.0001
6	SD	0.008	0.297	32.839	19.598	.0001
7	AUT JS	0.005	0.302	21.270	13.468	.0002
8	AI	0.003	0.305	15.338	7.904	.0050
9	EXT JS	0.002	0.307	12.102	5.230	.0223

From this analysis for the total group it appears that personal difference variables (represented by the career orientations) are the strongest determinants of job involvement. The indicators of situational differences - the job satisfaction factors - contributed far less. Furthermore, the satisfaction factor which had the strongest relationship with the dependent variable - intrinsic job satisfaction - may also be contaminated more by personal preferences and values than extrinsic satisfaction (see Chapter Five).

Prediction of the Job Involvement of Each Profession by means of Career Orientations and Job Satisfaction factors.

The results of the regression of the career orientations and job satisfaction factors onto job involvement for each profession are summarised in Table 41. In eleven out of fourteen analyses the inclusion of the satisfaction factors as independent variables improved the prediction of job involvement. The satisfaction factors added, on average, 5,5% to the model's predictive power. In common with the model for the overall group (Table 40) the intrinsic and autonomic factors had a stronger influence than the extrinsic factor. Again, these results tend to downplay the importance of the environment in determining job involvement as the intrinsic and autonomic factors are more dependent on personal values and preferences than the extrinsic factors.

TABLE 41: Summary of the Stepwise Regression of the Career Orientation and Job Satisfaction Variables Onto the Dependent Variable Job Involvement for each Professional Group.

Prof	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
Acc	1	CC	0.290	0.290	21.585	40.069	.0001
	2	TF	0.063	0.353	13.136	9.4607	.0027
	3	LS(-)	0.040	0.394	8.463	6.377	.0132
	4	INT JS	0.040	0.433	8.902	6.638	.0015
	5	SD	0.025	0.458	1.797	4.297	.0409
Arc	1	CC	0.199	0.199	62.658	38.240	.0001
	2	INT JS	0.112	0.311	34.736	24.782	.0001
	3	TF	0.052	0.363	22.762	12.438	.0006
	4	LS(-)	0.030	0.393	16.733	7.450	.0071
	5	SD	0.023	0.416	12.569	5.906	.0613
	6	ENT	0.017	0.433	10.052	4.426	.0371
	7	M(-)	0.019	0.451	7.108	4.975	.0272
Att	1	CC	0.155	0.155	30.680	17.534	.0001
	2	AUT JS	0.090	0.245	19.415	11.311	.0001
	3	LS(-)	0.039	0.283	15.742	5.044	.0271
	4	SD	0.043	0.326	11.410	5.923	.0169
Diet	1	SD	0.288	0.288	23.288	27.531	.0001
	2	CC	0.121	0.410	10.057	18.780	.0004
	3	INT JS	0.036	0.446	7.510	4.317	.0416
Doc	1	SD	0.196	0.196	43.240	28.211	.0001
	2	EXT JS	0.078	0.274	29.917	12.417	.0006
	3	TF	0.057	0.331	20.829	9.662	.0024
	4	LS(-)	0.067	0.398	9.659	12.648	.0006
	5	CC	0.030	0.429	5.714	5.960	.0162
Eng	1	INT JS	0.188	0.188	41.800	41.118	.0001
	2	CC	0.079	0.267	22.500	19.187	.0001
	3	AUT JS	0.045	0.312	12.477	11.471	.0095
	4	ENT	0.026	0.338	7.503	6.875	.0095
Phar	1	CC	0.219	0.219	34.006	38.647	.0001
	2	AI(-)	0.084	0.302	17.813	16.418	.0001
	3	TF	0.049	0.352	9.070	10.356	.0016
	4	AUT JS	0.027	0.379	5.192	5.870	.0167
Psy	1	INT JS	0.191	0.191	38.175	25.272	.0001
	2	CC	0.083	0.274	25.570	12.041	.0008
	3	TF	0.081	0.355	13.228	13.184	.0004
	4	EXT JS	0.029	0.383	10.179	4.809	.0305
	5	INT JS (Removed)	0.016	0.367	10.964	2.652	.1064
	6	AUT JS	0.039	0.407	6.038	6.857	.0101

Prof	Step	Variable	Partial R^2	Model R^2	C (p)	F	Prob > F
Rad	1	CC	0.218	0.218	7.023	32.900	.0001
	2	SD	0.038	0.256	3.114	5.903	.0166
	3	AUT JS	0.037	0.292	-0.658	6.014	.0517
Soc	1	CC	0.228	0.228	30.794	43.616	.0001
	2	TF	0.079	0.307	14.684	16.777	.0001
	3	SD	0.045	0.352	6.309	10.213	.0017
	4	EMT	0.021	0.373	3.526	4.832	.0295
	5	AUT JS	0.019	0.392	1.186	4.490	.0358
Vet	1	ENT	0.111	0.011	33.371	23.648	.0001
	2	SG	0.055	0.165	21.817	12.328	.0006
	3	CC	0.031	0.196	16.145	7.207	.0079
	4	LS(-)	0.031	0.2127	10.483	7.443	.0070
	5	INT JS	0.024	0.250	6.583	6.882	.0163
	6	TF	0.018	0.268	4.128	4.525	.0347

Looking more closely at the individual analyses, those for architects, attorneys, doctors, engineers and psychologists proved particularly noteworthy.

The prediction levels for architects and engineers were improved to a great degree by the introduction of the intrinsic satisfaction variables into the model. Intrinsic satisfaction shared 11% common variance with the job involvement of architects and a full 19% with that of engineers. The 19% variance attributable to intrinsic satisfaction more than doubled the prediction of the job involvement of engineers achieved by career orientations alone. The autonomic satisfaction factor added a further 4.5% to that model. Clearly, satisfaction was a more important component of the job involvement of engineers than any of the career orientations measured. Why this should be so while the converse is held true for all the other professions is unclear. Possibly intrinsic job satisfaction marks a successful accommodation by engineers of their Managerial orientations within a technical environment.

Intrinsic satisfaction initially entered the model predicting psychologists' job involvement with a partial R^2 of 0.19 but that correlation was reduced to insignificance with the addition of three further variables to the model and it was consequently removed from the final model.

The autonomic satisfaction variable entered strongly into the model predicting attorneys' job involvement and to a lesser extent into the models for engineers and psychologists which have already been mentioned.

Finally, the extrinsic satisfaction variable proved a particularly strong predictor of the job involvement of doctors. Effectively, if doctors have a strong sense of dedication to serve and are well rewarded they may also have high job involvement.

Conclusion

The results resported in this chapter provided unique and complex insights into the nature of job involvement. The results provided qualified support for the research hypothesis and reflected exceptionally high predictions of job involvement. More importantly, they added some fuel to the argument that job involvement is primarily an individual difference variable, with an interaction between the person and the situation having a secondary effect.

The research hypothesis was supported to the extent that career orientations did prove extremely strong predictors of job involvement, accounting for up to 40% of the variance in job involvement. Strictly speaking, job involvement was predicted by a combination of career orientations but in almost every analysis a single orientation had a partial

contribution of over half the variance explained by the entire model. This result represented qualified support for the hypothesis. It would therefore appear that Schein's (1985) observations of individuals "anchored" to their jobs by their value orientations were accurate although his interpretation that these individuals were satisfied as opposed to involved was misleading.

The Challenge/Competition orientation proved the single strongest predictor of job involvement and a model (Figure 24) was constructed to explain the correlation. The model suggests that a reciprocal relationship exists between the Challenge/Competition orientation and job involvement.

Finally, the effect of situational versus personal characteristics was assessed by the inclusion of the satisfaction factors into the model. It was suggested that the satisfaction factors would provide indirect indices of situational variables while the career orientations represented individual differences because they are based on enduring values. In the event the personal factors (career orientations) proved by far the greatest predictors. The satisfaction variables did improve the prediction levels to some extent, however, indicating that situational factors do have a limited effect on job involvement.

CHAPTER TWELVE

CONCLUSION

> "Theoretically, the aim of any science is to describe the unity and coherence of its subject matter ... And in the attempt to find an 'organizing principle' it has taken up and then dropped one idea after another: reflexes, information theory, computer processes, etc., etc., -- each new theoretical focus becoming a procrustean bed into which the facts of man's supposed nature are meant to fit but will not."
>
> Shotter (1975, p. 15)

In this concluding chapter the major findings of the study will be highlighted as each research problem and hypothesis is addressed in turn. Thereafter directions for future research will be discussed.

Instrumentation. The Career Orientation Inventory (DeLong, 1982a, 1982b; Schein, 1985) was subjected to a rigorous appraisal in view of its pivotal role in the research design and research aims. Theoretically the instrument was

criticised on the grounds of a possibly inappropriate format (Chapter Three) and on the inclusion of Lifestyle Integration as an orientation.

Following the psychometric assessment of the Career Orientation Inventory (Chapter Eight) further shortcomings came to light. A factor analysis revealed the instrument to be unstable within the South African professional population as against the samples used when the instrument was standardised in the United States of America. Of particular concern once again was the Lifestyle Integration factor. A number of the original scale items did not load on this factor, and the final scale had an unacceptably low internal reliability coefficient.

The Managerial Competence factor also proved problematic due to high intercorrelations with the Pure Challenge and Entrepreneurship factors. It was proposed that further item development focussing on an hypothesized "emotional stability" component of managerial competence (Schein, 1975) may result in a more distinct and salient measure.

An analysis of the items comprising the Pure Challenge factor suggested that competition and winning were the primary focus and the factor was thus reinterpreted and renamed as a Challenge/Competition orientation. Finally, as regards the Career Orientations Inventory, Job Security and Geographic Security appeared to be substantively unrelated. This finding was in contrast to Schein (1985) and DeLong's (1982a, 1982b)

assumption that they were alternative expressions of the same need for security.

Turning to the Short Form MSQ (Weiss, Davis, England & Lofquist, 1967) and the Kanungo (1982) job involvement measure, a more encouraging picture was revealed. The satisfaction and involvement scales were found to be both reliable and valid measures.

As evidence of their construct and content validity, the satisfaction and involvement scales were shown to be measuring distinctly different dimensions when their constituent items were entered into factor analyses together. The factor analyses led to two further conclusions of some relevance. The first was the decision to drop item seven from the job involvement scale due to its low loading on that factor. The second was the emergence of a separate job satisfaction factor that described satisfaction with the autonomy and independence a job allows.

Differences between professional groups. The investigation into the differences between the professions in their job satisfaction, job involvement, and career orientations resulted in a number of meaningful findings.

On a theoretical level the independence of the job involvement and job satisfaction constructs was underscored. Furthermore, generally low reported job involvement and high reported concern for an integrated lifestyle supported

research indicating that a high family and work involvement may be incompatible.

The comparisons between job satisfaction of nurses and other professional groups may be cause for concern. Nurses had lower job satisfaction than any other profession sampled and further data showed them to have far lower satisfaction than their American counterparts. In particular their scores on the autonomic satisfaction scale were significantly lower than those of any other profession.

Profiles of the career orientations of each profession relative to all other professions were constructed. These profiles provide an insight into the motives and values of the different professionals that may be of interest to their managers and counsellors alike.

Prediction of job satisfaction. The first research hypothesis was rejected and the null hypothesis accepted. Research designed to test the hypothesis, however, yielded a great deal of meaningful data.

The central thrust of the research hypothesis, that a single career orientation may determine job satisfaction proved unfounded. The career orientations did prove to be moderating variables in the job satisfaction experienced by professionals. However, the effect of the career orientations was better determined by hierarchies of career orientations rather than by a single orientation (in a manner similar to

that employed by Holland (1973, 1975)). This finding was in conflict with predictions derived from Schein's (1985) theory. Once again, following Shotter's (1975) observation that prefaced this chapter, the search for an 'organising principle' stumbled against facts which would not fit man's supposed nature. The attempt proved worthwhile though, as it did provide some insights into the complex nature of job satisfaction particularly in a context emphasizing the interaction between personality variables and aspects of the working environment.

An attempt to predict the general job satisfaction of the entire sample (undifferentiated by professional group) by means of career orientations returned a very low level of prediction. The level of prediction was greatly improved when the analyses were performed for each profession separately. This finding highlighted the importance of the person/environment interaction in producing job satisfaction.

The prediction levels improved again when intrinsic and autonomic satisfaction were addressed independently. It appeared that contextual needs (the focus of the extrinsic satisfaction measure) may be fairly consistent across different groups, whereas content needs were more the subject of personal value differences.

The autonomic satisfaction factor extracted for the purpose of this study contributed unique insight into the nature of satisfaction with the autonomy a job allows. This

view of autonomy may be expressed in terms of a two factor model. The first factor concerned the objective autonomy and freedom a job allows - for example lack of organisational rules and close supervision. The second factor was an intriguing one and strongly influenced by personal values/orientations. Essentially it appeared that where work was compatible with one's values the resulting affective experience was a sense of autonomy even if there was little actual scope for autonomous action.

Extrinsic satisfaction was moderated by the career orientations to a lesser extent than autonomic and intrinsic satisfaction. The career orientations apparently affect extrinsic satisfaction more by influencing work performance than by affecting one's response to the extrinsic factors themselves. The orientations that appeared most likely to maximise a person's rewards in his/her field also seemed most likely to increase extrinsic satisfaction. Thus, for example, a medical doctor who has strong orientations towards Entrepreneurship and Technical/Functional Competence (in almost equal parts) is likely to be satisfied with the extrinsic aspects of his/her work.

An extremely important conclusion arose from the comparison of the results of the attempt to predict job satisfaction by means of career orientations (Chapter Ten) with the profile of the career orientations for each profession reported in Chapter Nine. That is, the dominant

orientations identified within each professional group were not necessarily those most conducive to job satisfaction. This comparison exposed a dangerous weakness in the differential approaches discussed in Chapter Two. These approaches (which are readily applicable to career counselling) tend to assume that a desirable personality or interest profile for a profession corresponds to the average profile of the people presently employed within that profession. The present result suggests rather that the average profile of the subset of job satisfied people within a profession would form a more relevant reference point.

Prediction of job involvement. The analyses regressing the career orientations onto job involvement provided qualified support for the second research hypothesis. That is, one career orientation, Challenge/Competition, accounted for a great deal of the variance of job involvement (almost seventeen percent overall), however other orientations did enter the equations albeit at far lower levels.

The preeminence of the Challenge/Competition orientation in almost all the attempts to predict job involvement suggested that the relationship between the two had more to do with intervening variables such as self-esteem and personal growth than with Schein's (1985) theory. A model was constructed to explain the relationship which proved similar to Hall's (1978) model of Career Involvement.

Subsequent analyses included the job satisfaction factors as indirect indices of situational differences. These analyses enhanced the predictive power of the regression models. Prediction levels of over 45% were achieved with models comprised of career orientations and job satisfaction factors. An important contribution was made by these analyses as they must go some way towards explaining and resolving the controversy over the determinants of job involvement introduced in Chapter Four. It would appear that job involvement is a product of the interaction between personal and situational factors but with personality factors predominating.

Suggestions for Further Research

The present research fits into Collin and Young's (1986) concept of the ecological/systems approach to the study of careers. The professions correspond to Collin and Young's definition of an ecological niche. Furthermore, the variables under study have been described throughout this report, and particularly in the literature review, as simultaneously causes and effects of behaviour which is congruent with a systems approach. The success of the present study provides some vindication of the approach Collin and Young (1986) suggested and subsequent research may attempt to further define the system studied here and to expand the system to include other interacting life roles.

In defining the system more accurately, an initial research aim may be to refine the Career Orientation Inventory. The format of the instrument may need attention and further item development is needed to sample fully some of the content domains. Other orientations may also be discovered and tested. Finally, normative data for a revised instrument need to be collected. A secondary aim would be to identify further variables in the system encompassing the Career Orientations and the working environment. In particular the contextual variables are under-represented in the present study. Collin and Young (1986) also recommended a biographical approach to the study of careers. This approach may be adopted in order to identify salient situational variables and may also serve to counterbalance an inherent limitation in the correlational design employed in the present study. Because the study is a correlational one, the directions of causality are the subject of speculation only, and cannot be proved. Further research may thus concentrate on biographic and longitudinal studies to define the directions of cause and effect.

Finally, attempts to expand the system may consider the interactions between the system comprising the careerist with those encompassing other life roles such as child, student and spouse. Super's (1988) Life-Career Rainbow may sketch the salient life areas. Such research (particularly if

longitudinal or biographic) may also reveal the processes underlying the development of the career orientations.

The present research has provided a fascinating glimpse into the career orientations and work experience of a large sample of South African professionals. The image was certainly a complex one as Shotter (1975) warned. Nevertheless, the constructs and relationships that were revealed may provide additional bricks in the path to a better informed and consequently better employed future generation.

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APPENDIX A English Version of the Survey Instrument

Afrikaanse vraelys is op versoek beskikbaar. Verskaf asb. naam, adres en verwysingsnommer

Universiteit van Pretoria
Pretoria 0002 Telefax 30160 SA Telegr PUNIV Tel (012) 4209111
Graduate School of Management

Enquiries Mr RA Kaplan
Telephone (012) 420-3368

Ref.

Dear Sir/Madam

THE CAREER ANCHORS OF PROFESSIONAL PEOPLE

The choice of a career was one of the most important, and possibly most difficult, decisions that you have made. Any information that can help young people make a successful career choice is consequently extremely valuable. Now that you are established in your profession we would like you to assist us in a study being conducted with the goal of providing such information.

Copies of the attached questionnaire have been mailed to a scientifically drawn and representative sample of members of a spectrum of recognized professions. It is designed to investigate the values, motives, and experience of work of people trained in a professional field. It would be greatly appreciated if you could complete the questionnaire (it should take you approximately fifteen minutes) and return it to us in the stamped and addressed envelope provided. Any information you may provide will be regarded as strictly confidential and will be used exclusively for research purposes.

Should you be interested in your scores on the Career Anchor and Job Satisfaction scales included in the questionnaire please write your name and address in the space provided at the end of the questionnaire and the results will be mailed to you.

Thank you for your contribution to this important research.

Yours Sincerely

Signed by candidate

Signature Removed

AB Boshoff
PROFESSOR

SECTION 1: BIOGRAPHICAL INFORMATION

Where applicable please mark the appropriate block with a tick

1. Sex Male ☐ Female ☐

2. Age _____

3. Home Language _____

4. Present Marital Status

Single (Never Married)	☐
Married	☐
Divorced/Seperated	☐
Widow/Widower	☐

5. How many children do you have? _____

6. Employment : (Please tick appropriate square)

I work for myself	☐
I work for the government	☐
I work for a private sector employer	☐
I am retired (I do not pursue an occupation)	☐
I am unemployed but looking for work	☐

If you marked retired or unemployed refer to the last post you held in answering the remainder of the questionnaire.

7. Occupation : Please give a brief description of the work you do, irrespective of your training, qualification or rank (e.g. chemical engineer, personnel manager, computer scientist and not, professional officer, businessman or civil servant).

_ _ _ _

8. In your opinion are you still working primarily in your field of registration? Yes ☐ No ☐

9. Do you work full or part time? Full time ☐ Part time ☐

10. Have you at any stage in your career made a change in direction in your occupation? (For example, you were an engineer and then you started farming full time, or you were a teacher and became a minister.)
The normal trend of promotion in a career is not included with regard to this change in direction, for example, from teacher to principle or from clerk to manager.

Yes, I have changed in direction ☐

No, I have not changed ☐

If yes, from what occupation did you change to what occupation?

From _____ to _____.

11. If you, with the knowledge and experience you have now, look back on your career, would you again follow the same course of study that you have chosen? Yes ☐ No ☐

If no, what other course of study would you follow if you could choose all over again? _____.

SECTION 2: CAREER ANCHORS

Indicate on the scale (1 = of no importance to 10 = centrally important) how important each one of the following statements is for you.

		Of No Importance									Centrally Important
1.	To build my career around some specific functional or technical area is...	1	2	3	4	5	6	7	8	9	10
2.	The process of supervising, influencing, leading, and controlling people at all levels is...	1	2	3	4	5	6	7	8	9	10
3.	The chance to do things my own way and not to be constrained by the rules of an organization is...	1	2	3	4	5	6	7	8	9	10
4.	An employer who will provide security through guaranteed work, benefits, a good retirement program, etc., is...	1	2	3	4	5	6	7	8	9	10
5.	The use of my interpersonal and helping skills in the service of others is...	1	2	3	4	5	6	7	8	9	10
6.	Working on problems that are almost insoluble is ...	1	2	3	4	5	6	7	8	9	10
7.	Developing a life style that balance my career and family needs is...	1	2	3	4	5	6	7	8	9	10
8.	To be able to create or build something that is entirely my own product or idea is...	1	2	3	4	5	6	7	8	9	10
9.	Remaining in my specialized area as opposed to being promoted out of my area of expertise is...	1	2	3	4	5	6	7	8	9	10
10.	To be in charge of a whole organization is...	1	2	3	4	5	6	7	8	9	10
11.	A career that is free from organization restrictions is...	1	2	3	4	5	6	7	8	9	10
12.	An organization that will give me longrun stability is...	1	2	3	4	5	6	7	8	9	10
13.	Using my skills to make the world a better place to live and work in is...	1	2	3	4	5	6	7	8	9	10

		Of No Importance									Centrally Important
14.	Competing with and winning out over others is...	1	2	3	4	5	6	7	8	9	10
15.	Developing a career that permits me to continue to pursue my own life style is...	1	2	3	4	5	6	7	8	9	10
16.	Building a new business enterprise is...	1	2	3	4	5	6	7	8	9	10
17.	Remaining in my area of expertise throughout my career is...	1	2	3	4	5	6	7	8	9	10
18.	To rise to a high position in general management is...	1	2	3	4	5	6	7	8	9	10
19.	A career that permits a maximum amount of freedom and autonomy to choose my own work, hours, etc., is...	1	2	3	4	5	6	7	8	9	10
20.	Remaining in one geographical area rather than moving because of a promotion is...	1	2	3	4	5	6	7	8	9	10
21.	Being able to use my skills and talents in the service of an important cause is...	1	2	3	4	5	6	7	8	9	10

How true is each of the following statements for you?

		Not at All True									Completely True
22.	The most important things that happen to me involve my present job.	1	2	3	4	5	6	7	8	9	10
23.	The only real challenge in my career has been confronting and solving tough problems, no matter what area they were in.	1	2	3	4	5	6	7	8	9	10
24.	I have always tried to give equal weight to my family and to my career.	1	2	3	4	5	6	7	8	9	10

		Not At All True									Completely True
25.	I am always on the lookout for ideas that would permit me to start and build my own enterprise.	1	2	3	4	5	6	7	8	9	10
26.	To me, my job is only a small part of who I am.	1	2	3	4	5	6	7	8	9	10
27.	I will accept a management position only if it is in my area of expertise.	1	2	3	4	5	6	7	8	9	10
28.	I am very much personally involved in my job.	1	2	3	4	5	6	7	8	9	10
29.	I would like to reach a level of responsibility in an organization whereby I would supervise others in various business functions and my role would primarily be to integrate their efforts.	1	2	3	4	5	6	7	8	9	10
30.	During my career I have been mainly concerned with my own sense of freedom and autonomy.	1	2	3	4	5	6	7	8	9	10
31.	I live, eat, and breathe my job.	1	2	3	4	5	6	7	8	9	10
32.	It is more important for me to remain in my present geographical location than to receive a promotion or new job assignment in another location.	1	2	3	4	5	6	7	8	9	10
33.	I have always sought a career in which I could be of service to others.	1	2	3	4	5	6	7	8	9	10
34.	Most of my interests are centered around my job.	1	2	3	4	5	6	7	8	9	10
35.	Competition and winning are the most important and exciting parts of my career.	1	2	3	4	5	6	7	8	9	10
36.	A career is worthwhile only if it enables me to lead my life in my own way.	1	2	3	4	5	6	7	8	9	10

	Not At All True									Completely True
37. Entrepreneurial activities are the central part of my career.	1	2	3	4	5	6	7	8	9	10
38. I have very strong ties with my present job which would be very difficult to break.	1	2	3	4	5	6	7	8	9	10
39. I would rather leave my company than be promoted out of my area of expertise.	1	2	3	4	5	6	7	8	9	10
40. I will feel successful in my career only if I become a high level general manager in some organization.	1	2	3	4	5	6	7	8	9	10
41. Usually I feel detached from my job.	1	2	3	4	5	6	7	8	9	10
42. I do not want to be constrained by either an organization or the business world.	1	2	3	4	5	6	7	8	9	10
43. I prefer to work for an organization that provides tenure (lifetime employment).	1	2	3	4	5	6	7	8	9	10
44. I want a career in which I can be committed and devoted to an important cause.	1	2	3	4	5	6	7	8	9	10
45. Most of my personal life goals are job orientated.	1	2	3	4	5	6	7	8	9	10
46. I feel successful only if I am constantly challenged by a tough problem or a competitive situation.	1	2	3	4	5	6	7	8	9	10
47. Choosing and maintaining a certain life style is more important than is career success.	1	2	3	4	5	6	7	8	9	10
48. I consider my job to be very central to my existence.	1	2	3	4	5	6	7	8	9	10
49. I have always wanted to start and build up a business of my own.	1	2	3	4	5	6	7	8	9	10

	Not At All True									Completely True
50. I prefer to work for an organization that will permit me to remain in one geographical area.	1	2	3	4	5	6	7	8	9	10
51. I like to be absorbed in my job most of the time.	1	2	3	4	5	6	7	8	9	10

SECTION 3: MINNESOTA SATISFACTION QUESTIONNAIRE

The purpose of this questionnaire is to give you a chance to tell how you feel about your present job, what things you are satisfied with and what things you are not satisfied with.

On the basis of your answers and those of people like you, we hope to get a better understanding of the things people like and dislike about their jobs.

On the next page you will find statements about your present job.

- Read each statement carefully.
- Decide how satisfied you feel about the aspect of your job described by the statement.

  Keeping the statement in mind:

  - if you feel that your job gives you more than you expected, circle the 5 (Very Satisfied);
  - if you feel that your job gives you what you expected, circle the 4 (Satisfied);
  - if you cannot make up your mind whether or not the job gives you what you expected, circle the 3 (Neither Satisfied nor Dissatisfied);
  - if you feel that your job gives you less than you expected, circle the 2 (Dissatisfied);
  - if you feel that your job gives you much less than you expected, circle the 1 (Very Dissatisfied).

- Remember: Keep the statement in mind when deciding how satisfied you feel about that aspect of your job.
- Do this for all statements. Please answer every item.

Be frank and honest. Give a true picture of your feelings about your present job.

Ask yourself: How satisfied am I with this aspect of my job?

Very Sat. means I am very satisfied with this aspect of my job.

Sat. means I am satisfied with this aspect of my job.

N means I can't decide whether I am satisfied or not with this aspect of my job.

Dissat. means I am dissatisfied with this aspect of my job.

Very Dissat. means I am very dissatisfied with this aspect of my job.

On my present job, this is how I feel about....

	Very Dissat.	Dissat.	N	Sat.	Very Sat.
1. Being able to keep busy all the time	1	2	3	4	5
2. The chance to work alone on the job	1	2	3	4	5
3. The chance to do different things from time to time	1	2	3	4	5
4. The chance to be "somebody" in the community	1	2	3	4	5
5. The way my boss handles his/her workers	1	2	3	4	5
6. The competence of my superiors in making decisions	1	2	3	4	5
7. Being able to do things that don't go against my conscience	1	2	3	4	5
8. The way my job provides for steady employment	1	2	3	4	5
9. The chance to do things for other people	1	2	3	4	5
10. The chance to tell people what to do	1	2	3	4	5

		Very Dissat.	Dissat.	N	Sat.	Very Sat.
11.	The chance to do something that makes use of my abilities	1	2	3	4	5
12.	The way policies are put into practice	1	2	3	4	5
13.	My pay and the amount of work I do	1	2	3	4	5
14.	The chances for advancement on this job	1	2	3	4	5
15.	The freedom to use my own judgment	1	2	3	4	5
16.	The chance to try my own methods of doing the job	1	2	3	4	5
17.	The working conditions	1	2	3	4	5
18.	The way my co-workers get along with each other	1	2	3	4	5
19.	The praise I get for doing a good job	1	2	3	4	5
20.	The feeling of accomplishment I get from the job	1	2	3	4	5

Thank you again for your cooperation. If you would like to know your own scores fill in your name and address below.

NAME : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

ADDRESS : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _

APPENDIX B Afrikaans Version of the Survey Instrument with a follow up letter

English questionnaire available on request. Please supply name, address and reference number.

Universiteit van Pretoria
Pretoria 0002 Telex 30160 SA Telegr PUNIV Tel 012 420911

Nagraadse Bestuurskool

Navrae : Mnr R A Kaplan
Telefoon: (012) 420-3368

Verw:

Waarde heer/mevrou/mejuffrou,

DIE LOOPBAAN-ANKERS VAN PROFESSIONELE PERSONE

Onlangs is, as deel van 'n groot navorsingsprojek, aan u 'n vraelys gestuur. Die vraelys is ontwerp om u loopbaananker te identifiseer en u huidige vlak van werksbevrediging en -betrokkenheid te meet. Hierdie inligting sal ons help om die spesifieke kombinasies van vaardighede, waardes en motiewe wat in elkeen van die veertien professies wat ondersoek word, met werksbevrediging en -betrokkenheid verband hou, te identifiseer. Hierdie resultate kan op hul beurt mense lei om loopbane wat deur hulle as bevredigend en belonend ervaar sal word, te kies.

U samewerking is nodig en belangrik om hierdie betekenisvolle doel te bereik aangesien u deel is van 'n klein steekproef wat getrek is om die waardes en motiewe van u hele professionele groep te verteenwoordig. Nie-response deur u kan die resultate in onvoorspelbare rigtings beïnvloed of bydra tot die verkleining van die steekproefgrootte tot die punt van statistiese nie-betekenisvolheid.

Ek sal dit baie waardeer as u die tyd kan vind om die vraelys wat ons aan u gestuur het te voltooi en aan ons terug te stuur. In geval u nie meer die vraelys in u besit het nie, of dit nie ontvang het nie word 'n kopie daarvan by hierdie brief ingesluit.

Mag ek ook van die geleentheid gebruik maak om aan te dui dat daar ongelukkig in die oorspronklike vraelys wat u ontvang het 'n fout ingesluip het. In Deel 3. pagina 7 onder die subhoof "met dié punt in gedagte" is die syfers wat omsirkel moet word in dalende orde gerangskik terwyl hulle in stygende orde behoort te wees. Ons sal dit dus waardeer as u, indien u die vraelys nog nie voltooi en aan ons gestuur het nie, so vriendelik sal wees om die ingeslote kopie te voltooi en aan ons te stuur.

Dankie vir u aandag.

Met hoogagting, die uwe,

Signed by candidate

A B BOSHOFF Signature Removed
Professor

AFDELING 1: BIOGRAFIESE INLIGTING

Waar van toepassing merk asseblief in die toepaslike blokkie met 'n regmerkie (√).

1. Geslag — Manlik ☐ Vroulik ☐

2. Ouderdom .....

3. Huistaal .....

4. Huidige huwelikstatus

Ongetroud	☐
Getroud	☐
Geskei	☐
Weduwee/Wewenaar	☐

5. Hoeveel kinders het u? .....

6. Werkgewer: (Merk asseblief in die toepaslike blokkie.)

Ek werk vir myself	☐
Ek werk vir die regering	☐
Ek werk vir 'n werkgewer in die privaatsektor	☐
Ek is uit diens getree	☐
Ek is werkloos	☐

Ander, spesifiseer asseblief) .....

Indien "afgetree" of "werkloos" verwys asseblief in die res van die vraelys na die laaste post wat u beklee het.

7. Beroep: Gee asseblief 'n kort beskrywing van die werk wat u doen ongeag u opleiding, kwalifikasies of rang (bev. chemiese ingenieur, personeelbestuurder, rekenaarwetenskaplike en nie vakkundige, sakeman of staatsamptenaar nie.)

.....

8. In u opinie werk u nog steeds hoofsaaklik in u veld van registrasie?

Ja ☐ Nee ☐

9. Werk u voltyds of deeltyds?

Voltyds ☐

Deeltyds ☐

10. Het u al op enige stadium in u loopbaan van rigting verander in u beroep? (Byvoorbeeld, u was 'n ingenieur en toe het u voltyds gaan boer, of u was 'n onderwyser en het 'n predikant geword.)

Ten opsigte van hierdie verandering van rigting word die normale bevorderings=patroon in 'n loopbaan nie ingesluit nie, byvoorbeeld van onderwyser na skoolhoof, of van klerk na bestuurder.

Ja, ek het verander van rigting ☐

Nee, ek het nie verander nie ☐

Indien ja, van watter beroep het u verander na watter beroep?

Van ..... na .....

11. Indien u, met die kennis en ondervinding wat u nou het, terugkyk op u loopbaan, sou u weer dieselfde studierigting as die een wat u gekies het, wou volg?

Ja ☐

Nee ☐

Indien nee, watter ander studierigting sou u volg indien u weer kon kies?

.....

AFDELING 2: LOOPBAANANKERS

Dui op die skaal aan hoe belangrik (1 = van geen belang nie tot 10 = beslis belangrik) elkeen van die volgende vir u in u loopbaan is.

	Van geen belang nie									Beslis belangrik
1. Om my loopbaan om een of ander spesifieke funksionele of tegniese gebied te bou	1	2	3	4	5	6	7	8	9	10

		Van geen belang nie									Beslis belangrik
2.	Die proses van toesighouding, beïn=vloeding, leiding en beheer van mense op alle vlakke	1	2	3	4	5	6	7	8	9	10
3.	Die geleentheid om dinge op my eie manier te doen en nie deur die reëls van 'n organisasie beperk te word nie.	1	2	3	4	5	6	7	8	9	10
4.	'n Werkgewer wat sekuriteit bied in die vorm van gewaarborgde werk, voordele, 'n goeie aftredingsprogram, ens.	1	2	3	4	5	6	7	8	9	10
5.	Om my interpersoonlike en onder=steuningsvaardighede in diens van ander te gebruik.	1	2	3	4	5	6	7	8	9	10
6.	Om te werk aan amper onoplosbare probleme.	1	2	3	4	5	6	7	8	9	10
7.	Die ontwikkeling van 'n lewensstyl wat my loopbaan en familiebehoeftes balanseer.	1	2	3	4	5	6	7	8	9	10
8.	Om in staat te wees om iets wat totaal my eie produk of idee is te skep of op te bou.	1	2	3	4	5	6	7	8	9	10
9.	Om in my spesialiseringsveld te bly teenoor 'n bevordering buite my vakgebied.	1	2	3	4	5	6	7	8	9	10
10.	Om in beheer te wees van 'n hele organisasie.	1	2	3	4	5	6	7	8	9	10
11.	'n Loopbaan wat vry is van organi=satoriese beperkinge.	1	2	3	4	5	6	7	8	9	10
12.	'n Organisasie wat langtermyn=sekuriteit bied.	1	2	3	4	5	6	7	8	9	10
13.	Die gebruik van my vermoëns om die wêreld 'n beter plek te maak om in te lewe en in te werk.	1	2	3	4	5	6	7	8	9	10
14.	Mededinging met en oorwinning oor ander persone.	1	2	3	4	5	6	7	8	9	10
15.	Om 'n loopbaan te ontwikkel wat my sal toelaat om aan te hou om my eie lewensstyl na te volg.	1	2	3	4	5	6	7	8	9	10
16.	Die opbou van 'n nuwe sake=onderneming.	1	2	3	4	5	6	7	8	9	10

		Van geen belang nie									Beslis belangrik
17.	Om in my vakgebied te bly gedurende my loopbaan.	1	2	3	4	5	6	7	8	9	10
18.	Om na 'n hoë algemene bestuurspos bevorder te word.	1	2	3	4	5	6	7	8	9	10
19.	'n Loopbaan wat my maksimum vry=heid en outonomie bied om my eie werk, ure, ens. te kies.	1	2	3	4	5	6	7	8	9	10
20.	Om in dieselfde geografiese gebied te bly veeleer as om te verhuis as gevolg van 'n bevordering.	1	2	3	4	5	6	7	8	9	10
21.	Om in staat te wees om my vaardig=hede en talente in diens van 'n belangrike saak te gebruik.	1	2	3	4	5	6	7	8	9	10

Dui op die skaal aan hoe waar (1 = glad nie waar nie tot 10 = heeltemal waar) elkeen van die volgende is ten opsigte van u loopbaan.

		Glad nie waar nie									Heeltemal waar
22.	Die belangrikste dinge wat met my gebeur het, het betrekking op my huidige werk.	1	2	3	4	5	6	7	8	9	10
23.	Die enigste werklike uitdaging in my loopbaan tot dusver was om ernstige probleme die hoof te bied en op te los, ongeag die vakgebied.	1	2	3	4	5	6	7	8	9	10
24.	Ek probeer altyd om gelyke waarde te heg aan my familie en aan my loopbaan.	1	2	3	4	5	6	7	8	9	10
25.	Ek is voortdurend op soek na idees wat my sal toelaat om my eie onder=neming te begin en op te bou.	1	2	3	4	5	6	7	8	9	10
26.	Vir my is my werk net 'n klein gedeelte van wie ek is.	1	2	3	4	5	6	7	8	9	10
27.	Ek sal slegs 'n bestuursposisie aanvaar indien dit in my vakgebied is.	1	2	3	4	5	6	7	8	9	10
28.	Ek is baie persoonlik betrokke in my werk.	1	2	3	4	5	6	7	8	9	10
29.	Ek sal graag 'n verantwoordelikheids=vlak in 'n organisasie bereik waar ek toesig sal hou oor ander persone in organisasiefunksies en waar my rol primêr sal wees om hulle pogings te integreer.	1	2	3	4	5	6	7	8	9	10

		Glad nie waar nie									Heel=temal waar
30.	Ek is in my loopbaan hoofsaaklik besorgd oor my eie sin van vryheid en outonomie.	1	2	3	4	5	6	7	8	9	10
31.	Ek leef, eet en asem my werk in.	1	2	3	4	5	6	7	8	9	10
32.	Dit is vir my belangriker om in my huidige geografiese gebied te bly as om 'n bevordering of 'n nuwe werk=opdrag in 'n ander gebied te ontvang.	1	2	3	4	5	6	7	8	9	10
33.	Ek het nog altyd 'n loopbaan gesoek waarin ek ander tot diens kan wees.	1	2	3	4	5	6	7	8	9	10
34.	Die meeste van my belangstellings is rondom my werk gesentreer.	1	2	3	4	5	6	7	8	9	10
35.	Om te kompeteer en om te wen is die belangrikste en opwindendste aspekte van my loopbaan.	1	2	3	4	5	6	7	8	9	10
36.	'n Loopbaan is slegs die moeite werd indien dit my in staat stel om my lewe op my manier te lei.	1	2	3	4	5	6	7	8	9	10
37.	Entrepreneursaktiwiteite maak 'n belangrike deel van my loopbaan uit.	1	2	3	4	5	6	7	8	9	10
38.	Ek het baie sterk bande met my huidige werk wat baie moeilik sal wees om te breek.	1	2	3	4	5	6	7	8	9	10
39.	Ek sou eerder my organisasie verlaat as om buite my vakgebied bevorder te word.	1	2	3	4	5	6	7	8	9	10
40.	Ek sal slegs suksesvol in my loopbaan voel indien ek 'n algemene bestuurder op 'n hoë vlak in een of ander organisasie word.	1	2	3	4	5	6	7	8	9	10
41.	Ek voel gewoonlik onbetrokke by my werk.	1	2	3	4	5	6	7	8	9	10
42.	Ek wil nie deur 'n organisasie of die sakewêreld beperk word nie.	1	2	3	4	5	6	7	8	9	10
43.	Ek verkies om vir 'n organisasie te werk wat 'n lewenslange dienstermyn voorsien.	1	2	3	4	5	6	7	8	9	10
44.	Ek wil 'n loopbaan hê waarin ek my aan 'n belangrike saak kan bind en toewy.	1	2	3	4	5	6	7	8	9	10

		Glad nie waar nie									Heel=temal waar
45.	Die meeste van my persoonlike lewensdoelwitte is werks=georiënteerd.	1	2	3	4	5	6	7	8	9	10
46.	Ek voel slegs suksesvol indien ek gedurig uitgedaag word deur 'n ernstige probleem of 'n kompeterende situasie.	1	2	3	4	5	6	7	8	9	10
47.	Die keuse en instandhouding van 'n lewensstyl is belangriker as loopbaansukses.	1	2	3	4	5	6	7	8	9	10
48.	Ek beskou my werk as baie sentraal tot my bestaan.	1	2	3	4	5	6	7	8	9	10
49.	Ek het nog altyd begeer om 'n eie besigheid te begin.	1	2	3	4	5	6	7	8	9	10
50.	Ek verkies om vir 'n organisasie te werk wat toelaat dat ek in een geografiese area bly.	1	2	3	4	5	6	7	8	9	10
51.	Ek hou daarvan om die meeste van die tyd in my werk verdiep te wees.	1	2	3	4	5	6	7	8	9	10

AFDELING 3: MINNESOTA TEVREDENHEIDSVRAELYS

Die doel van hierdie vraelys is om u 'n kans te gee om aan te dui hoe u oor u huidige werk voel, waarmee u tevrede is en waarmee u nie tevrede is nie.

Op grond van u antwoord en die van andere soos u, hoop ons om 'n beter insig te verkry van dit waarvan mense in hulle werk hou, of nie hou nie.

Op die volgende bladsy sal u gegewens omtrent u huidige werk kry.

- Lees elke punt deeglik.
- Besluit hoe tevrede u is omtrent die aspek van u werk wat in die punt gestel word.

  Met die punt in gedagte

  - as u voel dat u werk u meer bied as u verwag het, omkring die 1 (baie tevrede);
  - as u voel dat u werk u bied wat u verwag het, omkring die 2 (tevrede);
  - as u nie kan besluit of die werk u bied wat u verwag nie, omkring 3 ("nie tevrede" of "ontevrede);
  - as u voel dat u werk u minder bied as wat u verwag het, omkring die 4 (ontevrede);
  - as u voel dat u werk u baie minder bied as wat u verwag het, omkring die 5 (baie ontevrede).

- Onthou: Hou die betrokke punt in gedagte as u besluit hoe tevrede u met daardie aspek van u werk is.

- Doen dit met al die punte. Antwoord asseblief elke item.

Wees eerlik en openhartig. Gee 'n getroue weergawe van u gevoelens omtrent u huidige werk.

Vra uself: Hoe tevrede is ek met hierdie aspek van my werk?

Baie tevr. beteken ek is baie tevrede met hierdie aspek van my werk.

Tevr. beteken is is tevrede met hierdie aspek van my werk.

N beteken ek kan nie besluit of ek met hierdie aspek van my werk tevrede of ontevrede is nie.

Ontevr. beteken ek is ontevrede met hierdie aspek van my werk.

Baie ontevr. beteken is is baie ontevrede met hierdie aspek van my werk.

		Baie tevr.	Tevr.	N	Ontevr.	Baie ontevr.
1.	Die moontlikheid om besig te bly.	1	2	3	4	5
2.	Die kans om op my eie te werk.	1	2	3	4	5
3.	Die kans om van tyd tot tyd verskillende dinge te doen.	1	2	3	4	5
4.	Die kans om "iemand" in die gemeenskap te wees.	1	2	3	4	5
5.	Die manier waarop my hoof sy/ haar ondergeskiktes behandel.	1	2	3	4	5
6.	Die bevoegdheid van my seniors om besluite te neem.	1	2	3	4	5
7.	Om in staat te wees om dinge te doen wat nie teen my beginsels is nie.	1	2	3	4	5
8.	Die wyse waarop my werk voor= siening maak vir werksekuriteit.	1	2	3	4	5
9.	Die kans om iets vir ander mense te doen.	1	2	3	4	5
10.	Die geleentheid om mense aan te sê wat om te doen.	1	2	3	4	5
11.	Die geleentheid om iets te doen waarin ek my bekwaamhede kan gebruik.	1	2	3	4	5

		Baie tevr.	Tevr.	N	Ontevr.	Baie ontevr.
12.	Die wyse waarop beleid in die praktyk toegepas word.	1	2	3	4	5
13.	My salaris en die hoeveelheid werk wat ek doen.	1	2	3	4	5
14.	Die kanse op vooruitgang in hierdie werk.	1	2	3	4	5
15.	Die vryheid om my eie oordeel te gebruik.	1	2	3	4	5
16.	Die geleentheid om my eie metodes in die werksituasie uit te toets.	1	2	3	4	5
17.	Die werksomstandighede.	1	2	3	4	5
18.	Die wyse waarop my mede-werkers met mekaar klaarkom.	1	2	3	4	5
19.	Die lof wat ek kry vir 'n taak wat goed gedoen is.	1	2	3	4	5
20.	Die gevoel van volbrenging wat ek kry uit my werk.	1	2	3	4	5

Weereens baie dankie vir u samewerking. As u graag u eie resultate wil weet, vul net u naam en adres in die onderstaande ruimte in.

NAAM : .....

ADRES : .....

.....

.....

.....

APPENDIX C Afrikaans Version of the Feedback Form

Universiteit van Pretoria
Pretoria 0002 Telex 30160 SA Telegr PUNIV Tel (012) 420911

Geagte Heer/Mevrou/Mejuffrou

UITSLAE VAN NAVORSING OOR LOOPBAANANKERS

Baie dankie vir u belangstelling in en deelname aan ons navorsing. Deur u bydrae kon ons tot betekenisvolle insigte en gevolgtrekkings kom. Op u versoek word 'n opsomming van u uitslae weergegee. As basis vir vergelyking word die uitslae van veertien professionele beroepe, u beroep ingesluit ook weergegee.

U tellings:

1. Loopbaanankers: Tegniese/Funksionele Vaardigheid (TF) _____

Bestuursvaardigheid (BV)_____ Selfbesturend/Onafhanklik (SO)____

Werksekuriteit (W)____ Geografiese Sekuriteit (GS)_____

Diens Toewyding (DT)_____ Suiwer Uitdagings (SU)____

Integrasie van Lewenstyl (IL)____ Entrepreneurskap (E)____

2. Werksbetrokkenheid (WB)____

3. Werksatisfaksie (WS)____

Gemiddelde tellings van persone in Professionele beroepe:

	TF	BV	SO	W	GS	DT	SU	IL	E	WB	WS
Aptekers	29	30	34	32	30	39	25	37	31	57	74
Argitekte	30	31	37	24	26	37	28	37	36	67	78
Dieetkundiges	30	28	33	31	31	39	25	37	28	54	75
Fisioterapeute	33	22	33	31	33	43	20	38	22	55	81
Ingenieurs	23	36	33	28	24	32	28	35	31	60	77
Maatskaplike Werkers	31	30	28	39	32	44	25	34	22	57	74
Mediese Dokters	33	23	34	28	28	39	23	37	23	62	75
Prokureurs	29	27	35	25	32	35	30	37	31	64	80
Radiografiste	30	27	29	38	34	42	23	38	21	53	77
Rekenmeesters	28	34	34	28	31	34	29	36	32	66	82
Sielkundiges	32	25	35	32	28	40	23	36	25	61	80
Tandartse	29	26	37	28	30	38	24	37	31	59	78
Veeartse	31	23	35	28	29	36	25	37	28	63	76
Verpleegsters	33	33	27	44	29	46	27	36	23	63	71

Die professionele groepe word op die horisontale as, en die gemiddelde loopbaananker, werksbetrokkenheid en werksatisfaksie tellings word op die vertikale as van die tabel op die vorige bladsy weergegee.

OMSKRYWINGS VAN LOOPBAANANKERS, WERKSBETROKKENHEID EN WERKSATISFAKSIE

1. Loopbaananker

U loopbaananker is daardie eie waarneming wat betrekking het op u motiewe en behoeftes, talente en vaardighede, asook persoonlike waardes wat u nie sal wil prysgee indien u gedwing sou word om 'n keuse te maak.

TEGNIESE/FUNKSIONELE VAARDIGHEID: Die primêre behoefte is om u talente en vaardighede in u spesifieke veld te kan uitlewe. U verkry 'n gevoel van identiteit deur die beoefening van u vaardighede en is op u gelukkigste indien u werk ruimte bied vir uitdagings en ontwikkeling. U sal belangstelling verloor in u werk, indien u nie geleentheid gebied word om u vaardighede te beoefen nie.

Alhoewel u bereidwillig is om te bestuur binne funksionele verband, is u nie primêr geïnteresseerd in bestuur nie. U sou onwilling wees om 'n algemene bestuursposisie te beklee, indien dit van u sou vereis om afstand te doen van u area van ondervinding en vaardighede.

BESTUURSVAARDIGHEID: Die primêre behoefte is om mense se pogings te integreer, om volle verantwoordelikheid te aanvaar vir resultate en om die verskillende funksies in die organisasie saam te snoer. Die werk vereis nie net analitiese vaardighede, maar ook interpersoonlike en groepsvaardighede asook emosionele elastisiteit om mag en verantwoordelikheid te kan hanteer. U voel dat u oor hierdie kombinasie van eienskappe en vaardighede beskik en u geniet om dit te beoefen. Indien u in 'n tegniese of funksionele area is, sal u gretig wees om na 'n meer algemene posisie te vorder. Bevrediging van beroepsdoelwitte sal eers geskied wanneer u 'n pos beklee waardeur u verskeie organisasie funksies bestuur bv. bemarking, produksie, verkope, ens.

SELFBESTUREND/ONAFHANKLIKHEID: Die primêre behoefte is om uself te bevry van organisatoriese reëls en beperkings ten gunste van die ontwikkeling van 'n beroep waar u kan besluit wanneer om te werk, waaraan te werk, en hoe hard om te werk. Almal het 'n sekere mate van onafhanklikheid nodig. Indien dit u loopbaananker is, sal u bereid wees om bevordering van die hand te wys ten gunste van onafhanklikheid. Om selfbesturend en onafhanklik te wees is egter nie dieselfde as 'n entrepreneur nie. Baie onderwysers, vryskut konsultante en ander sogenaamde selfbesturende beroepslui tree tot die professie toe weens die onafhanklikheid wat dit bied.

SEKURITEIT/STABILITEIT: Die primêre behoefte is om u beroep te stabiliseer sodat u kan ontspan en die gevoel ervaar van "ek het dit gemaak". Hierdie loopbaananker tree op die voorgrond met betrekking tot aangeleenthede soos finansiële sekuriteit bv. beplanning van pensioen en aftrede, geografiese stabiliteit soos om uself tot een woonarea te verbind en gevestig te raak in een huis, met ondernemingslojaliteit soos om uself te verbind tot een werkgewer. Almal is gemoeid met sekuriteit een of ander tyd.

Mense met hul loopbaanankers gevestig in sekuriteit mag talentvol wees en vorder tot hoë vlak posisies in organisasies, maar hulle verkies stabiele, voorspelbare werk en sal bevordering vermy wat riskant voorhou al bied dit uitdagings en geleenthede.

DIENS/TOEWYDING: Die primêre behoefte is om iets van waarde te bereik (bv. van die wêreld 'n beter plek te maak om te lewe; harmonie tussen mense te bewerkstellig; ander te help, soos in sogenaamde hulp professies). Indien u loopbaananker hier gevestig is, sal u geleenthede nastreef wat toelaat vir werk op u gebied van belangstelling al beteken dit dat u van beroep of organisasie moet verwissel. U sal nie werk aanvaar by 'n organisasie wat vyandig gesind is teenoor u waardes en u sal bevorderings of verplasings weier tensy dit u toelaat om te werk aan u saak.

SUIWER UITDAGINGS: Die primêre behoefte is om skynbaar onoplosbare probleme op te los, om te wen teen gedugte teenstanders en om moeilike struikelblokke te bowe kom. Die proses om te wen staan sentraal vir u as eerder 'n spesifieke veld of vaardigheid. Vir sommige word dit gedefineer deur interpersoonlike kompetisie bv. 'n verkoopsman mag elke kliënt as 'n tweestryd sien wat gewen moet word.

INTEGRASIE VAN LEWENSTYL: Die primêre behoefte is om al die hoof sektore van u lewe te laat saamwerk in 'n geïntegreerde geheel. U wil nie hê dat familie aangeleenthede of beroepsaangeleenthede u lewe domineer nie. U keuse van beroep of organisasie sal afhang van u vermoë om hierdie balans te handhaaf, en u sal bevordering of verplasing teëstaan indien dit die handhawing van die balans bemoeilik. U voel dat u identiteit meer verbind is met hoe u, u totale lewe uitleef, waar u uself vestig, en hoe u uself ontwikkel as met enige spesifieke werk, beroep of organisasie.

ENTREPRENEURSKAP: Primêre behoefte is om iets nuuts te skep, deur die gebruikmaking van voortspruitende motivering om struikelblokke te bowe kom, die bereidwilligheid om risiko's te loop en die behoefte van beroemdheid. 'n Sterk behoefte is om iets te skep en te voel dat dit deur u insette tot stand gekom het. Dit is u primêre motivering. U wil nie vir ander werk nie, tensy u die vryheid het om u eie organisasiestruktuur te skep. Sommige mense begin met hul eie besigheid, as gevolg van hul behoefte om selfversorgend te wees. Vir die entrepreneur is die hoofdoel om sy eie besigheid, konsep of organisasie te skep en dit dan uit te bou as 'n verlengstuk van homself.

2. Werksbetrokkenheid

Dit kan gedefinieer word as 'n persoon se psigologiese identifikasie met sy werk. Na betrokkenheid kan verwys word as die graad waartoe die persoon se totale werksituasie deel uitmaak van sy lewe of identiteit. Die werksbetrokke persoon word sterk beïnvloed deur sy totale werksituasie, weens sy waarneming van sy werk as 'n belangrike deel van sy selfkonsep.

3. Werksatisfaksie

Navorsing het getoon dat werknemers weens 'n groot verskeidenheid van redes werksatisfaksie ervaar. Werksatisfaksie is verwant aan taak eienskappe soos die hoeveelheid beheer wat die taak toelaat en die graad waartoe dit relevant is tot die werknemer se bekwaamheid. Hoe meer die werknemer ervaar dat hy in beheer is, hoe groter sy kreatiwiteit, hoe meer ervaar hy dat die taak by sy bekwaamhede aanpas en hoe groter is sy werksatisfaksie.

Weereens baie dankie vir u bydrae tot hierdie navorsing. Ek hoop dat hierdie uitslae darem van waarde was vir u.

Die uwe

Signed by candidate

Signature Removed

AB BOSHOFF
Professor

APPENDIX D English Version of the Feedback Form

Universiteit van Pretoria
Pretoria 0002 Telex 30150 SA Telegr PUNIV Tel (012) 420911

Dear Sir / Madam

RESULTS OF INVESTIGATION INTO CAREER ANCHORS

Thank you for your participation in our recent survey. With your help we have gained significant new insights into the motives and values that characterise various professional groups. As requested, a summary of your results is listed below. As a basis for comparison, the means for fourteen professional groups, your's among them, are also listed.

Your Scores:

1. Career Anchors: Technical/Functional (TF) ____

Managerial (M)____ Autonomy/Independence (AT)____

Job Security (JS)____ Geographic Security (GS)____

Service Dedication (SD)____ Pure Challenge (PC)____

Life Style Integration (LS)____ Entrepreneurship (ENT)____

2. Job Involvement (JI)____

3. Job Satisfaction (JS)____

Mean Scores for Professional Groups:

	TF	M	AI	SJ	SG	SD	PC	LS	ENT	JI	JS
Accountants	28	34	34	28	31	34	29	36	32	66	82
Architects	30	31	37	24	26	37	28	37	36	67	78
Attorneys	29	27	35	25	32	35	30	37	31	64	80
Dentists	29	26	37	28	30	38	24	37	31	59	78
Dieticians	30	28	33	31	31	39	25	37	28	54	75
Doctors	33	23	34	28	28	39	23	37	23	62	75
Engineers	23	36	33	28	24	32	28	35	31	60	77
Nurses	33	33	27	44	29	46	27	36	23	63	71
Pharmacists	29	30	34	32	30	39	25	37	31	57	74
Physiotherapists	33	22	33	31	33	43	20	38	22	55	81
Psychologists	32	25	35	32	28	40	23	36	25	61	80
Radiographers	30	27	29	38	34	42	23	38	21	53	77
Social Workers	31	30	28	39	32	44	25	34	22	57	74
Veternarians	31	23	35	28	29	36	25	37	28	63	76

Professional Groups are given along the side of the table on the previous page. Intials along the top of the table refer to the individual career anchors and to Job Involvement and Job Satisfaction.

DEFINITIONS OF CAREER ANCHORS, JOB INVOLVEMENT AND JOB SATISFACTION

1. CAREER ANCHORS

Your career anchor is that set of self-perceptions pertaining to your (1) motives and needs, (2) talents and skills, and (3) personal values that you would not give up if you were forced to make a choice.

The career anchor categories are:

Technical/Functional Competence: If your career anchor is a technical or functional area, your primary concern is to exercise your talents and skills in that area (e.g., engineering, finance, planning, or personnel). You derive your sense of identity from the exercise of your skills, and you are most happy when your work permits you to be challenged and to grow in that skill area. You would lose interest in a job that did not enable you to exercise your skills.

Although you are willing to manage others within the desired function, you are not primarily interested in management and are unwilling to go into general management if it requires giving up your area of experience and expertise.

Managerial Competence: If you have a managerial career anchor, your primary concern is to integrate the efforts of others, to be fully accountable for total results, and to tie together different functions in an organization. The job requires not only analytic skills, but also interpersonal and group skills and the emotional resilience to handle power and responsibility. You feel you have this combination of characteristics and skills and enjoy exercising them. If you are in a technical of functional area, you are anxious to move into a generalist position. You will not be satisfied that you have achieved you career goals until you have achieved a position in which you are managing various business functions, such as finance, marketing, production, engineering, and sales.

Autonomy/Independence: If autonomy or independence is your career anchor, your primary concern is with freeing yourself from organizational rules and restrictions in favor of developing a career in which you can decide when to work, on what to work, and how hard to work. Everyone needs a certain amount of autonomy. However, if it is your career anchor, you would be willing to turn down a promotion or some other opportunity in order to retain autonomy.

Security/Stability (Job security and Geographic security): If security or stability is your career anchor, your primary concern is to stabilize your career so that you can relax and feel that you have "made it". This anchor can show up in concern with financial security, such as pension and retirement plans; in concern with geographic stability, such as committing oneself to living in one area and becoming settled in one house; or in company loyalty, such as committing oneself to one employer and accepting whatever is required in exchange for job tenure (job security). Everyone is concerned with security at some time. However, if it is your career anchor, it is always a primary concern and you would not give it up for bigger opportunities.

People anchored in security may be talented and rise to high level positions in organizations, but they prefer stable, predictable work and will avoid a promotion or transfer that is risky even if it would provide challenge and opportunity.

Service/Dedication: If a sense of service or a dedication to a cause is your career anchor, your primary concern is to achieve some value (e.g. making the world a better place to live; improving harmony among people; helping others). If this is your career anchor, you will pursue opportunities that permit you to continue to work on your area of concern even if it means changing occupations or organizations. You would not take a job with an organization that was hostile toward your values, and you would refuse promotions or transfers unless they permitted you to work on your cause.

Pure Challenge: If pure challenge is your career anchor, your primary concern is to solve seemingly unsolvable problems, to win out over tough opponents, and to surmount difficult obstacles. The process of winning is most central to you, rather than a particular field or skill area. For some, this is defined in interpersonal competition terms; for example, a salesman may view every customer contact as a game to be won. Novelty, variety, and challenge become ends in themselves, and if something is easy it is boring.

Life-Style Integration: If life-style integration is your career anchor, your primary concern is to make all the major sectors of your life work together into an integrated whole. You do not wnat either your family concerns or your career concerns to dominate your life. You want to choose a job or organization on the basis of your ability to maintain this balance, and you would resist promotions or transfers that make such balance more difficult. You feel that your identity is more tied up with how you live your total life, where you settle, and how you develop yourself than with any particular job, career, or organization.

Entrepreneurship: If you have an entrepreneurial career anchor, your primary concern is to create somthing new, involving the motivation to overcome obstacles, the willingness to run risks, and the desire for personal prominence in whatever is accomplished. A strong need to build something and to feel that what was built is due to your efforts is primary motivation for you. You do not wnat to work for others unless you have the

freedom to build your own organization in your own way.

For the entrepreneur, the goal is to create the business, the concept, or the organization and to build it into and extension of himself or herself.

2. JOB INVOLVEMENT

Job involvement is the degree to which a person identifies psychologically with his/her work, or the importance of work in his/her total self-image.

3. JOB SATISFACTION

The job satisfaction questionnaire measures both the intrinsic, qualitative aspects of job satisfaction (for example whether your job is sufficiently challenging; allows you to be creative and whether you get recognition form your job) and more quantitative aspects such as satisfaction with your environment and pay.

Once again, thank your for your contribution to this research. I hope this feedback held some value for you.

Your sincerely

Signed by candidate

Signature Removed

AB BOSHOFF
Professor

APPENDIX E

SUMMARY DATA FOR RESEARCH VARIABLES

TOTAL SAMPLE

Variable	N	Mean	Standard Deviation
Job Satisfaction	1790	77.07	11.58
Intrinsic Job Satisfaction	1790	36.67	5.22
Extrinsic Job Satisfaction	1790	27.90	5.82
Autonomic Job Satisfaction	1790	12.50	2.31
Job Involvement	1791	51.45	15.37
Autonomy/Independence	1790	33.14	8.73
Challenge/Competition	1790	24.39	8.93
Entrepreneurship	1791	25.57	12.44
Geographic Security	1791	29.51	14.06
Job Security	1791	30.89	12.47
Lifestyle Integration	1791	41.13	7.03
Managerial Competence	1790	31.45	10.22
Service/Dedication	1791	38.67	8.46
Technical/Functional Competence	1789	28.53	10.93

PROFESSIONAL GROUPS

Profession	Variable	N	Mean	Standard Deviation
Accountants	JSat	100	82.66	8.52
	IntJSat	100	38.06	3.93
	ExtJSat	100	31.31	4.40
	AutJSat	100	13.29	1.44
	JInv	100	56.60	11.42
	AI	100	34.68	7.23
	CC	100	29.14	7.83
	ENT	100	32.40	9.50
	GSec	100	30.98	13.09
	JSec	100	27.05	9.60
	LS	100	38.70	6.54
	M	100	35.13	7.87
	SD	100	33.18	8.69
	TF	100	25.64	9.94

Profession	Variable	N	Mean	Standard Deviation
Architects	JSat	156	77.70	11.71
	IntJSat	156	36.07	5.58
	ExtJSat	156	28.92	5.24
	AutJSat	156	12.71	2.23
	JInv	156	57.77	15.35
	AI	156	36.62	6.83
	CC	156	27.13	8.68
	ENT	156	33.96	10.67
	GSec	156	26.29	13.56
	JSec	156	24.07	10.81
	LS	156	41.23	7.19
	M	156	35.23	8.54
	SD	156	37.13	6.94
	TF	156	29.94	10.13

Profession	Variable	N	Mean	Standard Deviation
Attorneys	JSat	98	81.24	8.69
	IntJSat	98	37.90	4.07
	ExtJSat	98	29.99	4.39
	AutJSat	98	13.35	1.58
	JInv	98	55.88	14.53
	AI	98	35.43	7.52
	CC	98	27.96	8.72
	ENT	98	29.78	10.75
	GSec	98	30.92	13.22
	JSec	98	25.52	11.01
	LS	98	41.15	7.15
	M	98	30.87	9.35
	SD	98	35.27	8.13
	TF	98	28.19	10.07

Profession	Variable	N	Mean	Standard Deviation
Dentists	JSat	107	77.73	9.86
	IntJSat	107	37.12	4.38
	ExtJSat	107	27.47	5.53
	AutJSat	107	13.14	1.91
	JInv	107	50.28	15.14
	AI	107	37.35	7.48
	CC	107	23.45	8.63
	ENT	107	28.67	10.76
	GSec	107	29.71	14.74
	JSec	107	28.05	12.46

	LS	107	41.01	6.40
	M	107	30.04	9.11
	SD	107	37.35	8.68
	TF	107	27.74	10.39

Profession	Variable	N	Mean	Standard Deviation
Dieticians	JSat	70	75.70	11.41
	IntJSat	70	36.00	5.42
	ExtJSat	70	27.00	6.12
	AutJSat	70	12.70	2.00
	JInv	70	45.73	15.84
	AI	70	32.91	8.71
	CC	70	23.28	8.68
	ENT	70	25.16	12.08
	GSec	70	31.83	14.52
	JSec	70	30.88	13.37
	LS	70	41.20	7.82
	M	70	32.49	9.59
	SD	70	39.09	6.62
	TF	70	27.66	9.35

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Profession	Variable	N	Mean	Standard Deviation
Engineers	JSat	180	76.34	10.53
	IntJSat	180	35.89	4.47
	ExtJSat	180	28.03	5.54
	AutJSat	180	12.42	2.07
	JInv	180	51.22	13.88
	AI	180	32.50	7.22
	CC	180	28.10	7.66
	ENT	180	29.81	10.96
	GSec	180	23.94	13.22
	JSec	180	27.77	10.57
	LS	180	39.56	6.55
	M	180	37.08	7.55
	SD	180	32.14	8.15
	TF	180	20.19	9.99

Profession	Variable	N	Mean	Standard Deviation
Medical Doctors	JSat	118	76.08	11.92
	IntJSat	118	37.13	5.64
	ExtJSat	118	26.62	5.65
	AutJSat	118	12.32	2.48
	JInv	118	53.06	15.52

	AI	118	33.49	8.84
	CC	118	21.72	8.73
	ENT	118	20.34	11.92
	GSec	118	28.68	13.76
	JSec	118	28.32	10.99
	LS	118	42.19	7.33
	M	118	26.02	10.22
	SD	118	39.29	7.47
	TF	118	31.30	10.59

Profession	Variable	N	Mean	Standard Deviation
Nurses	JSat	114	70.87	13.31
	IntJSat	114	35.59	5.64
	ExtJSat	114	24.85	6.85
	AutJSat	114	10.42	2.92
	JInv	114	53.57	16.37
	AI	114	26.96	9.30
	CC	114	26.21	10.13
	ENT	114	19.52	12.05
	GSec	114	28.31	14.36
	JSec	114	43.88	8.07
	LS	114	42.30	7.46
	M	114	36.57	11.02
	SD	114	46.13	4.60
	TF	114	30.60	11.29

Profession	Variable	N	Mean	Standard Deviation
Pharmacists	JSat	140	73.98	11.94
	IntJSat	140	34.92	5.44
	ExtJSat	140	27.20	5.73
	AutJSat	140	11.86	2.44
	JInv	140	48.39	17.42
	AI	140	33.33	8.63
	CC	140	24.41	8.99
	ENT	140	29.66	13.44
	GSec	140	29.61	14.77
	JSec	140	32.07	11.71
	LS	140	40.92	6.92
	M	140	32.32	9.70
	SD	140	39.02	8.64
	TF	140	27.10	10.95

Standard

Profession	Variable	N	Mean	Deviation
Physiotherapists	JSat	133	82.50	9.68
	IntJSat	133	38.82	4.01
	ExtJSat	133	30.51	5.19
	AutJSat	133	13.17	1.84
	JInv	133	46.08	14.33
	AI	133	32.39	8.69
	CC	133	18.61	8.01
	ENT	133	20.88	11.51
	GSec	133	33.70	13.62
	JSec	133	30.87	12.74
	LS	133	42.88	6.80
	M	132	24.48	10.26
	SD	133	42.46	7.15
	TF	133	32.79	10.82

Profession	Variable	N	Mean	Standard Deviation
Psychologists	JSat	111	79.27	10.84
	IntJSat	111	37.97	5.03
	ExtJSat	111	28.21	5.58
	AutJSat	111	13.09	2.10
	JInv	111	51.71	13.30
	AI	111	36.09	7.62
	CC	110	22.20	7.36
	ENT	111	22.51	10.72
	GSec	111	28.70	14.17
	JSec	111	31.77	11.69
	LS	111	40.36	6.35
	M	111	29.57	9.04
	SD	111	40.31	6.02
	TF	110	32.63	9.56

Profession	Variable	N	Mean	Standard Deviation
Radiographers	JSat	120	76.88	10.91
	IntJSat	120	37.50	4.73
	ExtJSat	120	27.11	6.17
	AutJSat	120	12.28	2.25
	JInv	121	43.55	14.51
	AI	121	29.62	9.49
	CC	121	22.14	9.60
	ENT	121	17.60	11.62
	GSec	121	34.31	14.38
	JSec	121	38.25	11.32
	LS	121	43.80	6.08
	M	121	29.51	10.60

	SD	121	42.06	8.11
	TF	121	29.00	11.14

Profession	Variable	N	Mean	Standard Deviation
Social Workers	JSat	151	74.41	12.84
	IntJSat	151	36.20	5.95
	ExtJSat	151	26.23	6.41
	AutJSat	151	11.98	2.42
	JInv	151	48.43	14.37
	AI	151	28.04	8.66
	CC	151	23.70	7.88
	ENT	151	18.24	9.86
	GSec	151	32.09	13.04
	JSec	151	38.42	11.09
	LS	151	40.10	7.35
	M	151	33.54	9.37
	SD	151	43.89	5.27
	TF	150	29.35	10.69

Profession	Variable	N	Mean	Standard Deviation
Veterinarians	JSat	192	76.05	12.00
	IntJSat	192	35.77	5.89
	ExtJSat	192	27.63	5.32
	AutJSat	192	12.66	2.39
	JInv	192	55.25	14.89
	AI	192	35.02	8.69
	CC	192	23.11	8.10
	ENT	192	27.14	11.41
	GSec	192	28.58	13.59
	JSec	192	27.63	12.09
	LS	192	41.01	7.21
	M	192	27.05	10.09
	SD	192	36.38	8.67
	TF	192	29.47	10.53

Key:

JSat	=	Job Satisfaction
IntJSat	=	Intrinsic Job Satisfaction
ExtJSat	=	Extrinsic Job Satisfaction
AutJSat	=	Autonomic Job Satisfaction
JInv	=	Job Involvement
AI	=	Autonomy/Independence Orientation
CC	=	Challenge/Competition Orientation
ENT	=	Entrepreneurial Orientation
GSec	=	Geographic Security Orientation

JSec	=	Job Security Orientation
LS	=	Lifestyle Integration Orientation
M	=	Managerial Competence Orientation
SD	=	Service/Dedication Orientation
TF	=	Technical/Functional Competence Orientation

Notes:

1. All career orientations scores were converted to scores out of 50.

2. N's may vary within a group. This is due to decisions t drop a respondent's score for a particular scale fr further analyses if the respondent returned excessiv missing values for that scale.